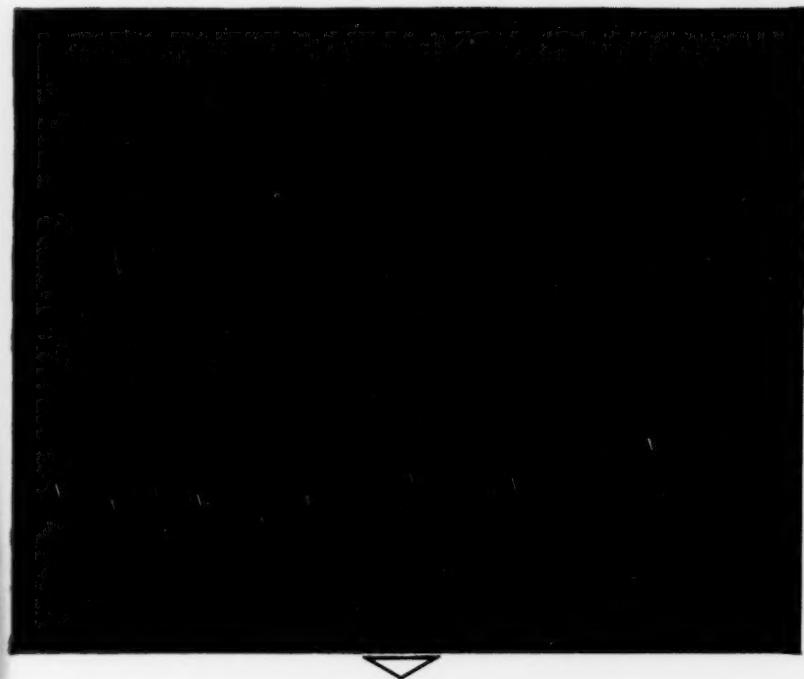


MODERN MEDICINE





MERCODOL provides prompt, selective relief that doesn't interfere with the cough reflex needed to keep throat passages and bronchioles clear.

This complete, pleasant-tasting prescription contains a *selective* cough-controlling narcotic¹ that doesn't impair the beneficial cough reflex . . . an effective bronchodilator² to relax plugged bronchioles . . . an expectorant³ to liquefy secretions. Remarkably free from nausea, constipation, retention of sputum, and cardiovascular or nervous stimulation.



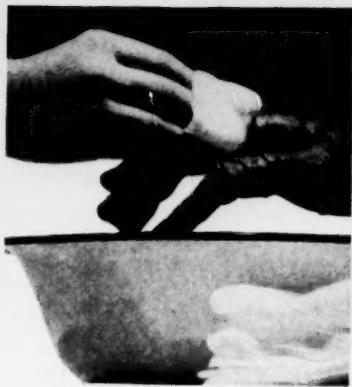
MERCODOL with DECAPRYN®
for the cough with a
specific allergic basis.



Each 30 cc. contains:

1 Mercodinone⁴ 10.0 mg.
2 Nethammine⁵ Hydrochloride 0.1 Gm.
2 Sodium Citrate 1.2 Gm.

CLEANSSES WITH LESS PAIN ...



- **WETTING**—Readily envelops dirt, grease, oil, epithelial and tissue debris, aiding the painless removal of irritant foreign materials from the wound site when gently rinsed with copious amounts of warm water.

- **CLEANSING**—Acidolate cleanses with less pain. High wetting power gives efficient, deep penetration of wounded area, frequently eliminating the added trauma usually necessary in cleansing of lacerations and extensive wounds.

- **LIQUID EMULSIFIER**—Fat-soluble and water-soluble contaminants are effectively loosened and removed without chemical damage to the skin area.

With no lather to hide the affected area, the initial cleaning is usually effective—all portions of the wound surface being readily visible, all but the most deeply embedded foreign matter removed. The pH of Acidolate closely approximates that of healthy skin.

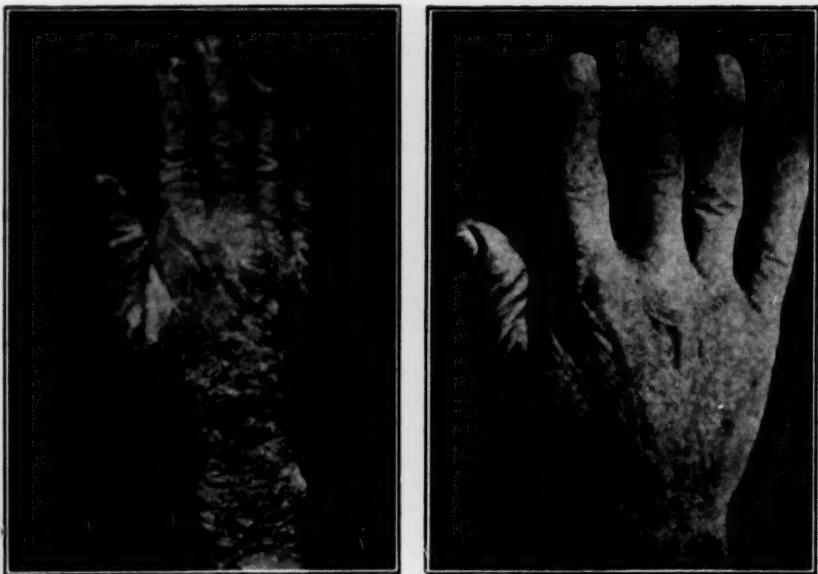
SUPPLIED: As a hypoallergenic liquid detergent in bottles of 8 fluid ounces and 1 gallon containers.

Whites

ACIDOLATE

WHITE LABORATORIES, INC.

NEWARK 7, NEW JERSEY



Photographs above show eczema of 7 years' duration and after 5 months' treatment with Mazon.

*The First Consideration in the
Treatment of Eczema
Local and Symptomatic Therapy*

Because of its diverse manifestations and the multiple etiologic factors including sensitization, local treatment of eczema is necessary in all cases—and in many instances is all that is required. Mazon, a thoroughly acceptable combination of mercury salicylate, sodium stearate, benzoic acid, salicylic acid and tars, is a non-staining, non-greasy preparation clinically efficacious in treating stubborn eczematous lesions when systemic or metabolic involvement is not demonstrable.

BELMONT LABORATORIES, Philadelphia, Pa.

MAZON

Cortone®

NOW AVAILABLE *for your daily practice* **WITHOUT RESTRICTION**

CORTONE* (Cortisone) is now available, through your usual source of medicinal supplies, without restriction. Pharmacists are prepared to fill your prescriptions for use of this remarkable hormonal substance in your daily practice. Hospitalization of individual patients is at the discretion of the physician.

CORTONE has already been used in the treatment of several thousand patients with rheumatoid arthritis. In virtually every case reported in the extensive literature, treatment with Cortone has produced prompt remission of active manifestations of the disease.

Key to a New Era in Medical Science
Cortone®
ACETATE
(CORTISONE Acetate Merck)
(11-Dehydro-17-hydroxycorticosterone-21-acetate)

Among the conditions in which Cortone has produced striking clinical improvement are:
RHEUMATOID ARTHRITIS and Related Rheumatic Diseases

ACUTE RHEUMATIC FEVER

ALLERGIC DISORDERS, including Bronchial Asthma (Status Asthmaticus)

INFLAMMATORY EYE DISEASES

SKIN DISORDERS, notably Angioneurotic Edema, Atopic Dermatitis, Exfoliative Dermatitis, including Cases Secondary to Drug Reactions, and Pemphigus

LUPUS ERYTHEMATOSUS (Early)

ADDISON'S DISEASE

*CORTONE is the registered trade-mark of Merck & Co., Inc. for its brand of cortisone.



MERCK & CO., INC.

Manufacturing Chemists

RAHWAY, NEW JERSEY

MODERN MEDICINE

THE JOURNAL OF DIAGNOSIS AND TREATMENT

EDITORIAL BOARD

James T. Case, M.D., *Chicago*
Franklin D. Dickson, M.D., *Kansas City*
Julius Hess, M.D., *Chicago*
Walter B. Hoover, M.D., *Boston*
Foster Kennedy, M.D., *New York City*
John C. Krantz, Jr., Ph.D., *Baltimore*
A. J. Lanza, M.D., *New York City*
Milton S. Lewis, M.D., *Nashville*
George R. Livermore, M.D., *Memphis*
Francis W. Lynch, M.D., *St. Paul*
Cyril M. MacBryde, M.D., *St. Louis*
Karl A. Meyer, M.D., *Chicago*
Alton Ochsner, M.D., *New Orleans*
Robert F. Patterson, M.D., *Knoxville*
Edwin B. Plimpton, M.D., *Los Angeles*
Fred W. Rankin, M.D., *Lexington, Ky.*
John Alton Reed, M.D., *Washington*
Rufus S. Reeves, M.D., *Philadelphia*
Leo Rigler, M.D., *Minneapolis*
Dalton K. Rose, M.D., *St. Louis*
Howard A. Rusk, M.D., *New York City*
Roger S. Siddall, M.D., *Detroit*
James S. Simmons, M.D., *Boston*
W. Calhoun Stirling, M.D., *Washington*
Frank P. Strickler, M.D., *Louisville*
Richard Torpin, M.D., *Augusta, Ga.*
Robert Turell, M.D., *New York City*
Dwight L. Wilbur, M.D., *San Francisco*
Paul M. Wood, M.D., *New York City*

SCIENCE WRITERS: Gene M. Lasater, M.D.,
Norman Shifter, M.D., T. C. Paper-
master, M.D., Bernardine Lufkin, Eliza-
beth Kane, Shanna McGee.

TRANSLATOR: John W. Brennan, M.D.

EDITORIAL CONSULTANTS

E. R. Anderson, M.D.
Joe W. Baird, M.D.
William C. Bernstein, M.D.
Lawrence R. Boies, M.D.
Edward P. Burch, M.D.
James B. Carey, M.D.
C. D. Creevy, M.D.
C. J. Ehrenberg, M.D.
W. K. Haven, M.D.
Ben I. Heller, M.D.
Miland E. Knapp, M.D.
Ralph T. Knight, M.D.
Elizabeth C. Lowry, M.D.
John F. Pohl, M.D.
Wallace P. Ritchie, M.D.
M. B. Sinsky, M.D.
A. V. Stoesser, M.D.
Arthur L. H. Street, LL.B.
Marvin Sukov, M.D.
Harry A. Wilmer, M.D.

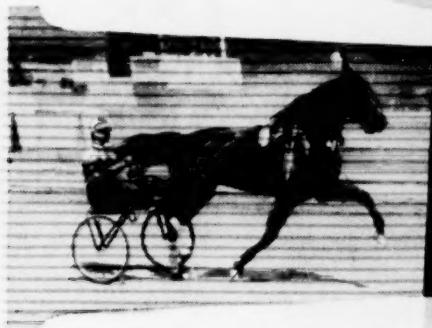
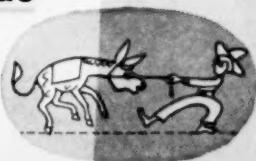
EDITORIAL STAFF

A. E. Hedback, M.D.,
Editor
Thomas Ziskin, M.D.,
Associate Editor
Maurice B. Visscher, M.D.,
Consultant in Sciences
Mark S. Parker,
Executive Editor
Sarah A. Davidson,
Managing Editor
Daisy Stilwell,
Art Editor
James Niess,
*Editorial Board
Secretary*
Lorraine Hannon
Mary Worthington
Editorial Assistants

*even in stubborn
slow healing wounds*

burns
ulcers

(decubitus, varicose, diabetic)



Desitin
OINTMENT
*the external
cod liver oil therapy*

accelerates healing

New clinical studies¹ again prove the ability of Desitin Ointment to ease pain, inhibit infection, stimulate healthy granulation, and accelerate smooth epithelialization in lacerated, denuded, ulcerated surface tissues . . . often in conditions resistant to other therapy.



protective, soothing, healing Desitin Ointment is a self-sterilizing blend of high grade, crude Norwegian cod liver oil (with its unsaturated fatty acids and high potency vitamins A and D in proper ratio for maximum efficacy), zinc oxide, talcum, petrolatum, and lanolin. Does not liquefy at body temperature and is not decomposed or washed away by secretions, exudate, urine or excrements. Dressings easily applied and painlessly removed.

Tubes of 1 oz., 2 oz., 4 oz., and 1 lb. jars.

write for samples and reprint

1. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surg. 18:512, 1949.

Desitin CHEMICAL COMPANY
70 Ship Street, Providence 2, R. I.

**Wider antibacterial range
...a safer sulfonamide**



Gantrisin 'Roche' offers clinically important advantages in urinary and systemic infections. Because it is highly soluble—even in acid urine—Gantrisin eliminates the danger of renal blocking and obviates alkalinization. Gantrisin is a single sulfonamide, not a combination or mixture; its use therefore reduces the likelihood of allergic reactions.

Gantrisin is distinguished by a wider antibacterial range; it has been effective in cases where antibiotics and other sulfonamides failed to produce results. Supplied in 0.5-Gm tablets, as a palatable syrup (0.5 Gm per 5 cc) and in 10-cc (4 Gm) ampuls.

HOFFMANN-LA ROCHE INC. • NUTLEY 10 • N. J.

Gantrisin®

*Brand of sulfisoxazole
(3,4-dimethyl-5-sulfanilamido-isoxazole)*

'Roche'

LETTER FROM THE EDITOR.....	14
CORRESPONDENCE.....	18
QUESTIONS & ANSWERS.....	26
FORENSIC MEDICINE.....	32
WASHINGTON LETTER.....	42

MEDICINE

Hypercholesterolemia and Arteriosclerosis <i>S. J. Thannhauser</i>	57
Intravenous Albumin.....	58
Diseases Responsive to ACTH.....	58
The Normal Blood Pressure Range <i>Arthur M. Master, Louis I. Dublin, and Herbert H. Marks</i>	59
Reactions to BAL.....	60
Adenoma of the Islands of Langerhans <i>Herbert A. Perkins, Jane F. Desforges, and Charles G. Guttas</i>	61
Antibiotic Treatment of Amebiasis <i>Harry Most, J. W. Miller, and E. J. Grossman</i>	62



Contents

for

*December 1
1950*

MODERN MEDICINE

VOL. 18, NO. 23



THE MAN ON THE COVER is Dr. S. J. Thannhauser, Clinical Professor of Medicine at Tufts College and Physician-in-Chief at Joseph H. Pratt Diagnostic Hospital, Boston. Before coming to Tufts in 1934, Dr. Thannhauser had served on the medical faculties of the universities of Munich, Heidelberg, and Freiburg and the Academy of Düsseldorf. He is the author of *Metabolism and Metabolic Diseases and Lipidoses: Diseases of the Cellular Lipid Metabolism*. He is a frequent contributor to scientific journals. The review of diseases of cholesterol metabolism, "Hypercholesterolemia and Arteriosclerosis" on page 57 is based upon Dr. Thannhauser's article "Xanthomatosis" which recently appeared in the *Journal of Mount Sinai Hospital*.

PLASTIC SURGERY

Plastic Repair of Breast Malformations
H. O. Barnes 63

SURGERY

Coagulation of Serum in Cancer Diagnosis
*Charles Huggins, Anne S. Cleveland,
and Elwood V. Jensen* 65

Acute Intestinal Obstruction
*Marshall L. Michel, Jr., Leonard Knapp,
and Arthur Davidson* 66

SURGICAL TECHNIGRAM

Posterior Gastrojejunostomy
F. M. Al Akl 68

GYNECOLOGY & OBSTETRICS

Premenstrual Tension
Joseph H. Morton 72

Dystocia from Cervical Abnormality
Hugh R. Arthur 73

Urinary Tract Injury in Gynecologic Surgery
Howard J. Holloway 74

Diagnosis of Toxemia in Pregnancy
Leon C. Chesley 75

NEUROLOGY

Manifestations of Autonomic Dysfunction
Richard H. Lyons and Francis S. Caliva 78

Abdominal Epilepsy
Matthew T. Moore 80



(Reich, Button and Nechtow
achieved 98% effective
results, as reported in
*Surgery, Gynecology
and Obstetrics*.*

The problem of TRICHOMONIASIS

resolves with

ARGYPULVIS

Effective therapy of Trichomoniasis can now be achieved with this new development of ARGYROL. Supplemental home use of identical powders in cap-

sule form solves the problem of better control in even stubborn cases.

The coupon below will bring you samples with details.

....in two convenient forms.....



For Use by the Physician.
7-gram bottles, fitting Holm-
spray or equivalent
powder-blower (in
cartons of 3).



For Home Use
by the Patient.
2-gram capsule
for insertion by
the patient (in
bottles of 12).

INTRODUCTORY TO PHYSICIANS: *On request we will send professional samples of ARGYPULVIS (both forms), together with a reprint of the Reich, Button and Nechtow report (Use coupon.)

A. C. Barnes Company
Dept. MM-120, New Brunswick, N. J.

Name.....

Address.....

City..... State.....

ARGYPULVIS

ARGYROL and ARGYPULVIS are registered trademarks, the property of
A. C. BARNES CO., NEW BRUNSWICK, N. J.



Contents
for
December 1
1950

CONTINUED

PEDIATRICS

Coarctation of the Aorta in Infancy

Martin M. Calodney and Merl J. Carson 81

RADIOLOGY

Contrast Medium for the Digestive Tract

Kurt Schneider and Egon Kruse 83

ORTHOPEDICS

The Patella

Edwin F. Cave and Carter R. Rowe 84

Nylon Arthroplasty of the Knee

John G. Kuhns and Theodore A. Potter 86

UROLOGY

Improved Tidal Irrigator

Ole A. Nelson and Alexander W. Kretz 87

MEDICAL FORUM

Varicose Veins in Pregnancy

..... 88

Spread of Tuberculosis by Thoracoplasty

..... 89

DIAGNOSTIX

SPECIAL REPORT

American College of Surgeons

Clinical Congress 95

BASIC SCIENCE BRIEFS

SHORT REPORTS

CURRENT BOOKS & PAMPHLETS

PATIENTS I HAVE MET

MODERN MEDICINE, The Journal of Medical Progress, is published twice monthly on the first and fifteenth of each month at Minneapolis, Minn. Subscription rate: \$5.00 a year, 25¢ a copy. Business Manager: M. E. Herz. Address editorial correspondence to 84 South 10th Street, Minneapolis 3, Minn. Telephone: Bridgeport 1291. ADVERTISING REPRESENTATIVES: New York 17: Lee Klemmer, George Doyle, Bernard A. Smiler, 50 East 42nd Street, Suite 401. Telephone: Murray Hill 2-8717. CHICAGO 6: Jay H. Herz, 20 North Wacker Drive, Suite 1921. Telephone: Central 6-4619. SAN FRANCISCO 4: Duncan A. Scott & Co., Mills Bldg. Telephone: Garfield 1-7950. LOS ANGELES 5: Duncan A. Scott & Co., 2978 Wilshire Blvd. Telephone: Dunkirk 8-4151.

This Dosage Schedule...

will produce optimal clinical results

	After breakfast	After lunch	After dinner	At bedtime
1st day of treatment	2 mg.	2 mg.	2 mg.	2 mg.
3rd day of treatment	3 mg.	2 mg.	2 mg.	3 mg.
6th day of treatment	3 mg.	3 mg.	3 mg.	3 mg.
9th day of treatment	4 mg.	3 mg.	3 mg.	4 mg.
12th day of treatment	4 mg.	4 mg.	4 mg.	4 mg.
15th day of treatment	5 mg.	4 mg.	4 mg.	5 mg.
18th day of treatment	5 mg.	5 mg.	5 mg.	5 mg.

VERILOID* *in* Hypertension

The dosage schedule shown above is designed to produce optimal clinical results with Veriloid. Dosage is increased as indicated, to a point where an acceptable drop in tension is recorded. It is important to determine the dosage requirement of each individual, since the therapeutic need varies from patient to patient.

Veriloid should be taken preferably with or immediately after meals and at bedtime, *but never more often than at 4-hour intervals*. Experience has shown that the average patient responds best to a daily dose of 10 to 12 mg. When an acceptable drop in pressure has been obtained without side effects, the dosage level at that point is considered the maintenance dose.

Veriloid, representing the active hypotensive ester alkaloids of *Veratrum viride*, is biologically standardized in mammals for uniform hypotensive activity. It is available on prescription only through all pharmacies in 1.0 mg. tablets, bottles of 100 or 200. Literature on request.

*Trade Mark of Riker Laboratories, Inc.

RIKER LABORATORIES, INC. • 8480 BEVERLY BLVD., LOS ANGELES 48, CALIF.

LETTER FROM THE EDITOR

Dear Reader:

Information is useful only if you have it at your fingertips. How often have you said, "Now where was it that I saw an article about this very condition?"

Obviously you can't recall everything you have read. Neither can you foretell just which of the articles you peruse this week you will want to reread next month or next year. But when you do want a bit of information it is a fine thing to be able to go right to it.

We know you feel that way because we are constantly receiving letters from readers whose memory has failed them but who believe such-and-such an article appeared "a few months ago" in *Modern Medicine*.

Of course we can tell you, but there is a certain loss of time in correspondence; often time is important. A more efficient method is to have a copy of the *Modern Medicine Index* right on your desk. Then, in less than a minute, you have your answer.

The *Index* is sent without charge to every reader who asks for it. Costs of publishing the *Index* are too great to justify indiscriminate distribution. However, we want every reader who can use a copy to have one. So we are asking you to send in your reservation card early. Before the end of this month we will place the order with the printer based on the reservations that have been made by that time.

Last year so many orders came in late that our supply of indexes was exhausted and we had to disappoint some of our readers. This year, with your cooperation, we hope that we will have copies enough for all. But don't delay. Turn to page 129 and fill out the coupon today. Then you will be sure to get your copy. And please print your name and address. Last year some orders could not be filled because the addresses were illegible.



EDITOR

announcing

ESKACILLIN-SULFAS

fluid presentation

penicillin

sulfonamides

'ESKACILLIN-SULFAS' is for the prevention and treatment of infections caused by organisms sensitive to the action of penicillin or the sulfonamides.

Exceptionally palatable, each teaspoonful (5 cc.) of 'ESKACILLIN-SULFAS' supplies 100,000 units of crystalline potassium penicillin G and a total of 0.5 Gm. (0.167 Gm. each) of the following *three* sulfonamides: sulfadiazine, sulfamerazine and sulfamethazine.

'ESKACILLIN-SULFAS' has 5 outstanding advantages:

- 1 Wider antibacterial spectrum
- 2 Additive and synergistic action
- 3 Relative safety of triple sulfonamide therapy
- 4 Proven effectiveness of oral penicillin
- 5 Lessened chance of developing drug-resistant organisms

'ESKACILLIN-SULFAS' is not a bulky compound tablet. It is an easy-to-take fluid—available in 2 fl. oz. bottles.

Smith, Kline & French Laboratories, Philadelphia

'Eskacillin' T.M. Reg. U.S. Pat. Off.

For Daytime Sedation in the Aged

.....

Urging the "selection of specific barbiturates for specific purposes," Dripps¹ writes of his results with Butabarbital Sodium (Butisol Sodium):

"Fifteen of the patients receiving prolonged sedation were 65 years of age or older. The results of 15 mg. doses in these patients were remarkably good. The patients were suffering from such conditions as peptic ulcer, coronary occlusion, hyperthyroidism, congestive heart failure and hypertension

"Anxiety states in the older age groups appeared to respond well to small doses of the sedative."

The action of Butisol Sodium is "intermediate between the fast-acting derivative, pentobarbital, and the longer-acting barbital and phenobarbital."²

Butisol is "destroyed fairly rapidly in the body."² With proper regulation of dosage there is no cumulative action and a minimum of lethargy and "hang-over."

DOSAGE FORMS:

Elixir Butisol Sodium, 0.2 Gm. (3 gr.)
per fl. oz., green

- Tablets, 15 mg. (1/4 gr.), lavender
- Tablets, 30 mg. (1/2 gr.), green
- Tablets, 50 mg. (1/4 gr.), orange
- Tablets, 0.1 Gm. (1 1/2 gr.), pink
- Capsules, 0.1 Gm. (1 1/2 gr.), lavender

1. Dripps, R. D.: Selective Utilization of Barbiturates, J.A.M.A., **139**; 148-150 (Jan. 15) 1949.

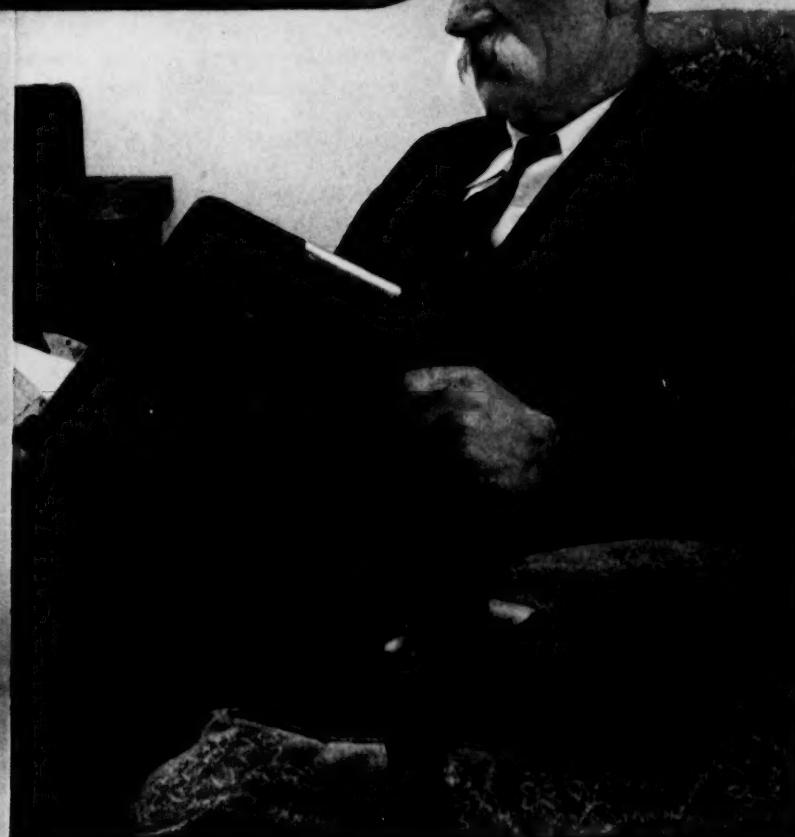
2. New & Nonofficial Remedies, Council on Pharmacy and Chemistry, A.M.A., J. B. Lippincott, 1949, pp. 456-457.



McNEIL LABORATORIES, INC., PHILADELPHIA 32, PENNSYLVANIA

Butisol® Sodium

BRAND OF BUTABARBITAL SODIUM



Elixir BUTISOL® SODIUM McNEIL

Its bright, green color and refreshing flavor
appeal to all; excellent prescription vehicle.
Clinical samples on request.



Correspondence

Communications from the readers of MODERN MEDICINE are always welcome. Address communications to The Editors of MODERN MEDICINE, 84 South 10th St., Minneapolis 3, Minn.

Wants Back Issues

TO THE EDITORS: Ever since I first came across a copy of *Modern Medicine*, I have labored furiously as a treasure hunter to locate back issues. My search has yielded but fourteen copies from 1948 to the present.

One issue itself sheds rays of hope on the problem, in telling that the articles, as well as the *Diagnostix*, are compiled yearly, in a separate volume. Please shed more rays of hope, and inform me whether additional copies—either singly or in the yearly compilations—can yet be obtained covering past issues.

In the meantime, I won't let any more copies slip by me.

DAVID E. REISER, M.D.
Rochester, N.Y.

¶ Back copies of *Modern Medicine* are at a premium. We do have a few copies of the *Modern Medicine Annual* for most of the years since 1943 which we will be able to supply at the price of \$5 a copy. Each *Annual* contains the editorial material published during the previous year.—Ed.

Cartoons Popular

TO THE EDITORS: I always enjoy your cartoons. They are the first thing I look for when I receive *Modern Medicine*.

R. B. CHRISMAN, JR., M.D.
Miami

Aborts Scintillating Scotoma Attacks

TO THE EDITORS: We read with interest Dr. C. W. Banner's recent communication (*Modern Medicine*, Sept. 1, 1950, p. 50) in regard to scintillating scotoma. We are quite interested in this problem because of the frequency with which we encounter this phenomenon in our migraine patients.

The same type of symptom often is present during the aura of the migraine attack. It represents vasoconstriction of the cerebral and ocular blood vessels.

We have recently noted that immediate sublingual use of nitroglycerin will often abort these attacks and even prevent the subsequent pain of migraine. It might, therefore, be of interest to know the effect nitroglycerin would have in the case of Dr. Banner.

LESTER S. BLUMENTHAL, M.D.
MARVIN FUCHS, M.D.
Washington, D.C.

¶ This suggestion has been forwarded to Dr. Banner.—Ed.

► TO THE EDITORS: The syndrome described by Dr. C. W. Banner (*Modern Medicine*, Sept. 1, 1950, p. 18) is, unfortunately, not excessively rare. The two commonest causes are simply different aspects of the same fun-

NEW
The Stuart
V-C-M

VITAMINS • CALCIUM • MINERALS

**11 VITAMINS ... B12
 9 MINERALS ... CALCIUM
 IN 1 TABLET**

**AN OUTSTANDING PRODUCT FOR 3 GROUPS OF PATIENTS
 COMPARE**

Suggested Daily Dose	As a Dietary Supplement		Therapeutic Dose as in Pregnancy or other conditions	
	1 Tablet	2 Tablets	3 Tablets	4 Tablets
VITAMIN A	5,000 USP Units	10,000 USP Units	15,000 USP Units	20,000 USP Units
VITAMIN D	400 USP Units	800 USP Units	1,200 USP Units	1,600 USP Units
VITAMIN C	50 mg.	100 mg.	150 mg.	200 mg.
VITAMIN E (1000 USP Units)	0.05 mg.	1.7 mg.	2.55 mg.	3.4 mg.
VITAMIN B ₁	3 mg.	6 mg.	9 mg.	12 mg.
VITAMIN B ₂	3 mg.	6 mg.	9 mg.	12 mg.
VITAMIN B ₃	0.5 mg.	1 mg.	1.5 mg.	2 mg.
NIACIN AMIDE	15 mg.	30 mg.	45 mg.	60 mg.
CALCIUM PANTOTHENATE	5 mg.	10 mg.	15 mg.	20 mg.
FOULIC ACID	0.5 mg.	1 mg.	1.5 mg.	2 mg.
VITAMIN B ₁₂ (1000 USP Units)	1 mg.	2 mg.	3 mg.	4 mg.
CALCIUM	250 mg.	500 mg.	750 mg.	1,000 mg.
PHOSPHORUS	190 mg.	380 mg.	570 mg.	760 mg.
IRON	10 mg.	20 mg.	30 mg.	40 mg.
COPPER	0.5 mg.	1 mg.	1.5 mg.	2 mg.
IODINE	0.075 mg.	0.15 mg.	0.225 mg.	0.3 mg.
BORON	0.05 mg.	0.1 mg.	0.15 mg.	0.2 mg.
COBALT	0.05 mg.	0.1 mg.	0.15 mg.	0.2 mg.
ZINC	0.1 mg.	0.2 mg.	0.3 mg.	0.4 mg.
MANGANESE	0.3 mg.	0.6 mg.	0.9 mg.	1.2 mg.

LOW IN COST TO PATIENTS

Available at all Pharmacies



Most products containing B12 use
either crystalline B12 or B12 concentrate

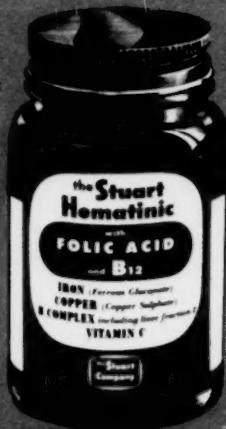
The New Stuart Hematinic with Folic Acid and B-12

gives all the advantages of
both forms of B12

PLUS

- ★ Ferrous Gluconate for greater tolerance
- ★ Therapeutic amounts of B Complex and C
- ★ Liver Fraction for Natural B Complex
- ★ Copper
- ★ Tablet form for complete stability
- ★ Tablet disintegrates gradually in the stomach, releasing iron at a desirable rate

LOW IN COST TO PATIENTS



Available at
all Pharmacies



All Stuart Products are Sold by Ethical Methods Only

damental condition; that is, an impairment of the retinal circulation.

It may be analogous to migraine, in which case it is called ophthalmic migraine and is the result of a transient vasospasm, or it may be due to the gradual impairment of circulatory efficiency not uncommonly seen in elderly persons. In either case, whatever measures are practical to improve circulatory efficiency are likely to be beneficial.

In a letter on the same page as Dr. Banner's, Dr. William F. Redardon of Hartford, Conn., sees a connection between a legal decision and a medical history which is not obvious to me. I agree with your consultant in neurology (July 1, 1950, p. 24), that until some medical evidence is presented to demonstrate a direct causal relationship between electric shock and the neurologic condition which followed it so remotely, we have no right as men of scientific training to follow the *post hoc, ergo propter hoc* argument which is so popular among unscientific people.

HANFORD L. AUTEN, M.D.

Hanover, N.H.

► TO THE EDITORS: I am familiar with scintillating scotoma as described by Dr. C. W. Banner (*Modern Medicine*, Sept. 1, 1950, p. 18), as well as disk scotoma which covers the front center field of vision. One or the other appears most often during hurry and vigorous efforts, when trying to do tasks in a half hour that should take several hours.

I have mentioned this to a number of physicians and no one seemed to have an answer, but now, relying

entirely on myself, I believe I have it.

There is a lack of blood that supplies the brain center of vision or perhaps anemia of the brain during these episodes. Very often amaurosis, dimness of vision, precedes the attacks, and there seems to be a temporary cardiac insufficiency. I find that a stiff dose of strychnine, gr. 1/30, always gives prompt relief; gr. 1/60 is usually enough. If I do not have strychnine with me, I lie with head well downhill and soon have relief.

I believe that the attacks sometimes may be precipitated by excessive pipe smoking. The strychnine is a physiologic antagonist to nicotine.

The disk scotomata are beautiful, usually very bright; they change in color through all the colors of the spectrum, always in the same order. The next to last to appear is red, the last is green; then I know I can start to get up and go. I have had this amazing phenomenon for many, many years, at intervals of weeks or months.

I should like to hear from an ophthalmologist or others with a lot of light. Anemia of the brain and eye structures could conceivably be one of the causes leading to crystalline lens opacity or cataract. Avitaminosis could also.

C. L. SCHANG, M.D.

Greenville, Pa.

Thoroughly Enjoyable

TO THE EDITORS: I am happy to receive *Modern Medicine*. It's thoroughly enjoyable.

RAYMOND J. FITZPATRICK, M.D.
Orlando, Fla.



BEST FOR BED PATIENTS

Tycos® Aneroid with Hook Cuff

1. **Accurate in any position . . .** Ideal for bed-side use.
2. **Time-saving . . .** Zip open case . . . Circle Cuff around arm . . . Hook . . . and it's on!
3. **Pocket-size . . .** Weighs only 19 ounces . . . Easily fits coat pocket.
4. **Greater protection during use . . .** Gage securely attached to Cuff minimizes accidental dropping.
5. **Easier to use . . .** Hook Cuff fits any size or shape adult arm. Can't balloon at edges.
6. **Roomy zipper case . . .** Easily holds the complete, ready-to-use instrument. No fussy packing!
7. **Full range dial . . .** Reads to 300mm.
8. **10-year guarantee . . .** Manometer readjusted free of charge — even if you drop it! (Cost of broken parts extra.)

Only \$39.50 with Tycos Hook Cuff in zipper case. Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada. *Registered Trade-Mark

TAYLOR INSTRUMENTS
MEAN ACCURACY FIRST

Not So Simple

TO THE EDITORS: I should like to comment on the recent paper about calculation of drug dosage for children (*Modern Medicine*, Sept. 15, 1950, p. 81).

No pediatrician will agree with the idea of calculating the dose of drugs on the basis of the size of the child, regardless of age, weight, or surface. One of the fundamental facts in pediatrics is that children are not only a smaller type of man, but react to physiologic and pathologic stimuli differently than do adults.

Some examples may be sufficient: The newborn is resistant to cyanide, strychnine, and carbon monoxide in a dose much higher than the lethal dose for adults. Adrenalin and ephedrine have very similar effects, but ephedrine has almost no effect in young children. The reason is that the adrenals contain a very small amount of epinephrine; ephedrine works by protecting the natural epinephrine from destruction.

Drs. John D. Crawford, Mary E. Terry, and G. Margaret Rourke speak about the calculation for sulfonamide drugs, which is reasonable, but the idea that the above formula may be applied to any drug is completely wrong. Such a universal formula is a squaring of the circle.

Pediatrics is not as simple as that!

HANS MAUTNER, M.D.
Wrentham, Mass.

Helpful beyond the Railroad

TO THE EDITORS: *Modern Medicine* is one of my most valued means of keeping up to date in this sixth largest city of Turkey, still 30 miles from the railroad.

ALBERT W. DEWEY, M.D.
Gaziantep, Turkey



The effective
triple
sulfonamide
that eases
your mind
about possible
toxic effects

Pansulfa offers you the most reliable safeguards against crystalluria and renal damage. This effective triple sulfonamide contains sulfacetamide—the least toxic sulfonamide studied.* Your prescription for Pansulfa offers

- 1 The established antibacterial power of three sulfas.
- 2 Less danger of crystalluria or renal damage.
- 3 Uniform dosage—the thixotropic gel of the suspension assures even dispersion. Also available in palatable tablets.

Pleasant tasting

PANSULFA

SULFACETAMIDE
SULFADIAZINE
SULFAMERAZINE

Each teaspoonful or tablet contains 0.5 Gm. (7½ gms.) of the rapidly soluble sulfonamides 1:1:1



*See Lehr, Di Federation Proc. 8:315 (1949).

"PANSULFA" trademark

ACTHAR

ARMOUR LABORATORIES BRAND OF
ADRENOCORTICOTROPIC HORMONE

**NOW AVAILABLE FOR THERAPY
IN AMBULATORY PATIENTS**

ACTHAR, Armour Laboratories Brand of Adrenocorticotropic Hormone (A.C.T.H.), is no longer restricted to hospitalized patients, nor is special confirmation from the physician relating to its use required. ACTHAR now can be dispensed by or on the prescription of a physician and must be supplied in the original unbroken package.

✓ ACTHAR is preferred for its physiologic mode of action. ACTHAR stimulates the adrenal gland to secrete the whole spectrum of adrenal corticoids without inducing adrenal atrophy . . . a potential risk in substitution therapy.

Periodic Status Reports on ACTHAR therapy will be released by Armour Laboratories in order to keep the physician informed of the rapid developments in this important field of therapeutics.

ACTHAR is supplied in 10, 15, 25, 40 and 50 mg. vials, in packages of 10 and 25 vials.

A[®] **ARMOUR**
Laboratories

C H I C A G O 11, I L L I N O I S

Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, 87 South Tenth Street, Minneapolis 3, Minnesota.

QUESTION: A very nervous woman thirty-five years old has a greenish white discharge which is easily expressed from both nipples. Breasts are not tender and have no localized tumor masses. Despite treatment with tight binder, estrogens, progesterone, and testosterone, the condition hasn't improved since its appearance nearly four months ago. Smears show only a few pus cells. Antibiotics have been of no benefit. What is the diagnosis and treatment?

M.D., Connecticut

ANSWER: By Consultant in Gynecology. If the condition was preceded by lactation, the diagnosis is probably galactorrhea. However, secretion can be expressed in about 2 to 4% of adult women without history of pregnancy. The green tinge noted may be due to contamination with *Bacillus pyocyanus*.

Large doses of estrogens may stop the secretion, but the results are usually unsatisfactory. In the absence of palpable breast pathology and after cytologic smear study to rule out the possibility of malignant disease, treatment should consist of cleansing the nipples twice daily with soap, water, and alcohol, and instructing the patient to avoid handling or expressing the breasts. This expectant treatment usually results in spontaneous cessation of the secretion, although sometimes not for several years.

QUESTION: What is the proper treatment for athlete's foot?

M.D., Ohio

ANSWER: By Consultant in Dermatology. Various applications containing unsaturated fatty acids are effective in the treatment of dermatomycosis. Other preparations also are effective and relatively nonirritating. Perhaps the treatment in most general use utilizes ointments containing undecylenic acid and its salts, or propionic acid. Ointments can be applied twice daily until symptoms are relieved. Powder can then be used each morning for supplemental therapy and a preventive of recurrence. Personal prophylaxis is best carried out by good hygiene and the use of a foot powder.

QUESTION: Is there any area in the United States with a climate that has a favorable effect on the symptoms of low-grade chronic recurring rheumatoid arthritis?

M.D., New York

ANSWER: By Consultant in Internal Medicine. The climate considered to be most favorable for rheumatic conditions is one with slight variations of temperature, humidity, and barometric pressure. These conditions exist in Arizona and New Mexico.



WITH A **Ritter ENT UNIT**

As a busy physician you can conserve your energy, yet serve more patients with a Ritter ENT Unit . . . designed especially to help you utilize your skills more thoroughly. You can treat patients without moving from the chair. A stretch of the arm brings air, water, vacuum, electricity, or waste into immediate use. Equally accessible are spray bottles, medicaments and low voltage instruments. Diagnostic and treatment time is kept to a minimum . . . with patients more at ease. Low voltage instruments are properly angled for easy grasp.

Then, too, there is a Ritter ENT Unit to fit your favorite operating technique. The Ritter cuspidor can be on the right or left as part of the unit, or, as a separate piece of equipment. Ritter ENT Units are made to position at either right or left of the chair.

Start now to enjoy the advantages of a Ritter ENT Unit best suited to your technique.

Choose the **UNIT** to fit your technique



Model MA, Type 1,
swinging cuspidor at
right of chair.



Model MB, Type 2 Unit,
at left, surgical cuspidor
at right of chair.



Model MB, Type 1 Unit,
at right, surgical cus-
pidor at left of chair.

FOR ADVANCED EQUIPMENT
LOOK TO

Ritter
COMPANY, INCORPORATED
RITTER PARK, ROCHESTER, N. Y.



QUESTIONS & ANSWERS

QUESTION: I would like to know how acne rosacea can be effectively treated. Are vitamins or hormones of value?

M.D., Connecticut

ANSWER: By *Consultant in Dermatology*. Treatment of acne rosacea is largely dependent upon the type of eruption. The cause of the condition is unknown, therefore treatment has to be symptomatic. Papular eruptions are treated by the methods usually applied in acne vulgaris and frequently respond to suitable doses of x-ray therapy. Telangiectasia can often be helped by electrolysis or superficial electrofulguration of the individual vessel. Rhinophyma is best treated surgically.

Internal factors influence the course of the disease. Vitamin therapy, however, is of doubtful value. When used, vitamin B complex or

components, especially riboflavin, is given. Hormonal therapy often is beneficial if there are other reasons for giving this treatment. Anemia should be treated, and gastrointestinal disturbances controlled.

QUESTION: A patient fifty years old received many transfusions for a bleeding duodenal ulcer. About six months later jaundice developed. Over a period of weeks the clinical picture confirmed by liver function tests was that of a viral hepatitis. Could this have been transmitted by the transfusions six months before?

M.D., West Virginia

ANSWER: By *Consultant in Internal Medicine*. The patient may have had homologous serum hepatitis considered to be of viral origin and, in this instance, induced by transfusion of blood from a donor who had had viral hepatitis.



"You say that this 'Sports Event Contract' assures me of being paged on the public address system at least 3 times per game?"

Life's Weary Moments

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent \$5. The December 1 winner is

*Henry L. Wall, M.D.
Oklahoma City*

Mail your caption to
The Cartoon Editor
Caption Contest
No. 1

MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.

now Feojectin

a completely new form of iron therapy



**"We can now treat successfully
those refractory iron-deficiency anemias
that have previously defied us."**

(Editorial, *The Lancet*, Jan. 1, 1949)

Feojectin is a stable solution of saccharated iron oxide for *intravenous injection only*. It is particularly indicated for those cases of iron-deficiency anemia in which oral medication (1) is ineffective, (2) is not well tolerated, or (3) produces results too slowly.

Feojectin is supplied in boxes of six 5 cc. ampuls. (Each ampul contains the equivalent of 100 mg. of elemental iron.)

Feojectin

for use when oral iron fails

*Smith, Kline & French Laboratories
Philadelphia*

"Feojectin" Trademark

Robitussin® 'Robins' opens a new era in non-narcotic cough therapy

Recent experimental and clinical evidence (through the development of more dependable investigative methods) has inspired the formulation of this completely new and different antitussive-expectorant. Robitussin 'Robins' unites glyceryl guaiacolate (unexcelled for its intense and prolonged action in increasing respiratory tract fluid^{1,4,5})—with desoxyephedrine (a sympathomimetic bronchodilator,⁶ which also helps improve patient mood and sense of well-being⁷)...in a highly palatable, aromatic syrup vehicle. Robitussin makes expectoration easier and freer, and diminishes dry, irritating cough—yet it is non-toxic and non-narcotic.

uses In acute head and chest colds, bronchitis, laryngitis, tracheitis, pharyngitis, pertussis, influenza, measles. Also helpful as palliative of harmful cough in tuberculosis, chronic paranasal sinusitis, tobacco cough.

formula Each 5 cc. (1 teaspoonful)

of Robitussin contains:

Glyceryl guaiacolate 100 mg.

Desoxyephedrine hydrochloride 1 mg.

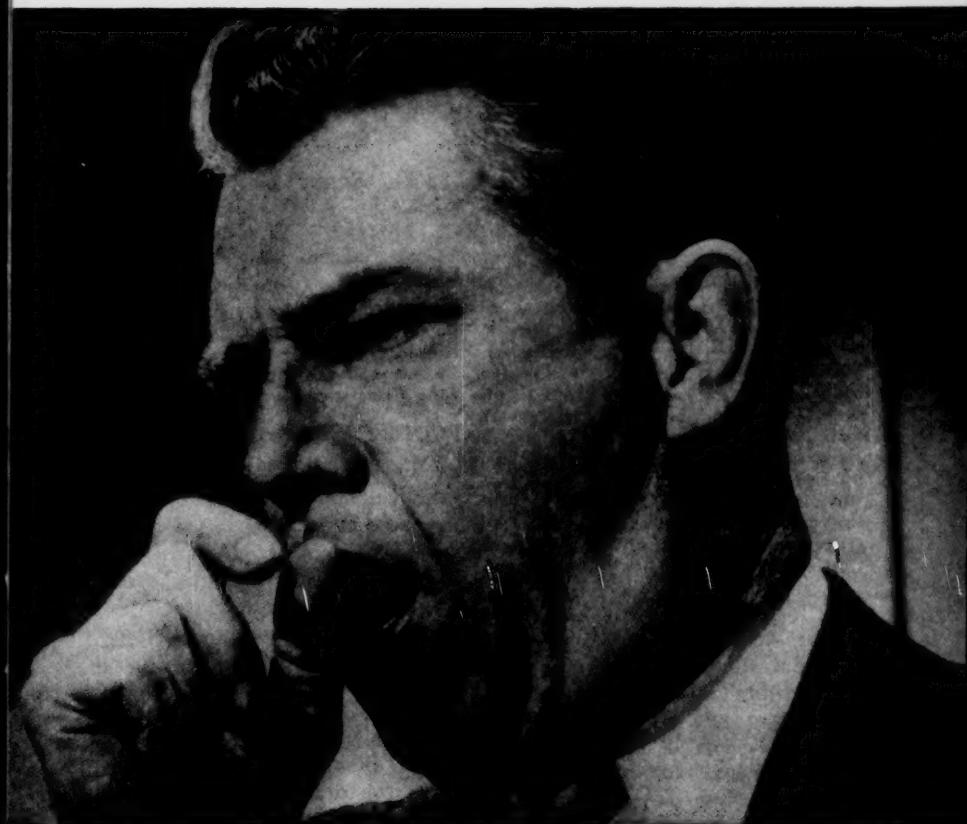
In a palatable aromatic syrup.

dosage Adults: 1 to 2 teaspoonfuls, repeated every 2 to 3 hours as necessary. Children: $\frac{1}{2}$ to 1 teaspoonful according to age, 3 or more times daily.

available In pints and gallons.

A. H. ROBINS CO., INC. • RICHMOND 20, VA.
Ethical Pharmaceuticals of Merit since 1878





references

1. Connell, W. F. et al.: Canadian M.A.J., 42:220, 1940.
2. Foltz, E. E. et al.: J. Lab. & Clin. Med., 28:603, 1943.
3. Novelli, A. and Tainter, M. L.: J. Pharmacol., 77:324, 1943.
4. Perry, W. F. and Boyd, E. M.: J. Pharmacol. Exper. Therap., 73:65, 1941.
5. Stevens, M. E. et al.: Canadian M.A.J., 48:124, 1943.

To facilitate productive cough...
to minimize harmful cough

Rx Robitussin®



Forensic Medicine

COMPILED BY ARTHUR L. H. STREET, LL.B.

PROBLEM: The Kentucky Workmen's Compensation Law, like statutes in other states, precludes an injured workman from collecting an award for permanent disability that can be avoided by an operation not more than "ordinarily unsafe." Did a workman who sustained a left inguinal hernia forfeit right to a permanent disability award by refusing to submit to herniotomy, when a doctor testified that if he were the patient he would rather wear a truss, because the result of an operation was speculative?

COURT'S ANSWER: No.

The Kentucky Court of Appeals said that, under the statute, a workman is not bound to submit to herniotomy or any other operation, if medical experts disagree as to the danger or benefits involved (229 S.W. 2d 52).

PROBLEM: Were Minnesota physicians holding no license to practice medicine in Wisconsin properly permitted to testify to testator doctor's mental capacity in a will contest in Wisconsin? They had often talked with the deceased nonprofessionally and treated him at a Minnesota hospital when he made the will. Their testimony was limited by the trial judge to such observations and opinions as a layman could testify to.

COURT'S ANSWER: Yes.

This case was decided by the Wisconsin Supreme Court (41 N.W. 2d 191).

PROBLEM: Could an association of naturopaths maintain suit against a state medical board to enjoin interference by the board with practice of naturopathy by individual members of the association?

COURT'S ANSWER: No.

The Maryland Court of Appeals decided that the association of naturopaths, being incapable of practicing and not seeking any relief on its own behalf, had no right to sue the state medical board.

The association asked that the medical board be enjoined from prosecuting naturopaths under accusations of illegal medical practice, that naturopathy be decreed to be a distinct branch of healing art from medical practice, and that naturopaths be permitted to use the title "naturopathic physician."

In addition to upholding dismissal of the suit because the association had no right to sue on behalf of its members, the Court of Appeals ruled that a suit to enjoin prosecutions under the medical act could not be maintained without making the police commissioner and the state's attorney for Baltimore defendants, because they were charged by statute with the duty to prosecute violations of the act in that city, where the suit originated (62 Atl. 2d 538).

(Continued on page 37)

in rheumatoid arthritis

effective
safe
inexpensive



The adrenal cortex plays an important role in rheumatoid arthritis. Recent studies have shown a close relationship between sulfur metabolism and adrenal cortical activity. This offers a scientific explanation for the consistently good clinical results which have followed the administration of **Sulphocol Sol.**

Sulphocol® Sol

Solution of
for **Colloidal Sulfur Compound**
intramuscular administration



Sulphocol Sol: 25 cc. multiple-dose vials;
12 and 100—2 cc. vials.

Dose: 0.25 to 0.5 cc.
intramuscularly at 3 to
7 day intervals,
gradually increased to 3 cc.

WRITE FOR LITERATURE



The National Drug Company, Philadelphia 44, Pa.

More Than Half a Century of Service to the Medical Profession

A PRODUCT OF THE MULFORD COLLOID LABORATORIES

The physician knows

. . . but the patient too seldom appreciates

the mechanical function of food

Few constipated patients realize that food not only must nourish the body but stimulate intestinal movement with sufficient bulk of good consistency . . . and that improper diet, irregular meal hours, and inadequate food bulk contribute to sluggish bowels.

An aid to patient-education

Proper food, properly eaten at regular mealtimes, is one of the "7 Rules for 7 Days," clearly outlined in a simple leaflet designed for better patient-understanding, to overcome the "improper habits of living and eating . . . which either singly or combined" cause constipation.¹

Available to physicians: Pads of the "7 Rules" may be had on request. Simply write "7 Rules" on a prescription blank and send to Chilcott Laboratories, Morris Plains, New Jersey.

An aid to physiologic correction

Cellothyl, physiologically correct bulk, may be prescribed to help re-establish normal intestinal motility for those patients who can't or won't eat adequate bulk-producing foods.

7 RULES FOR 7 DAYS

1. When you feel the urge to pass a bowel movement, attend to it at once, even if it means interrupting your meal or work.
2. Observe a suitable time daily for bowel evacuation. Take all the time you need. Make yourself comfortable; if the toilet seat is too high, use a foot rest. Don't strain. Relax.
3. Meals should be eaten at a regular mealtime. Eat slowly and chew food well. Some fruit and fruit juice, vegetables, salads, whole wheat bread or cereal should be included daily. And to make up for the bulk lacking in the diet of most constipated people, take Cellothyl daily as directed.
4. Drink 8 glasses of water upon arising, and at least one glass

Excellent results with anticonstipation regimen reported in clinic and private practice

In 80 to 92% of patients in private practice^{2,3} constipation was corrected when Cellothyl was used in the anticonstipation regimen. Even in obstinate clinic-treated cases,¹ it was found that years of constipation can be corrected in days with Cellothyl.

Because the usual program of diet-and-instruction *per se* often fails to change deeply ingrained habits, these investigators made *physiologic correction* with Cellothyl an integral part of their regimens. A simple program such as the following should produce "good" or "excellent" results in the majority of patients.

1. "The simple rules of bowel hygiene"³ are explained and effort is directed against contributory causes¹⁻³ — faulty

diet, cathartic abuse, etc. As a daily reminder of your advice, you may want to give the patient a copy of the leaflet, "7 Rules for 7 Days," which is available on request.

2. Cellothyl (physiologically correct colloid) is prescribed, 3 tablets t.i.d., each dose with a full glass of water to assure proper hydrophilic action.

3. The patient is told not to expect results in a few hours. He must give his bowels a chance to return to normal. And because Cellothyl acts in an unhurried physiologic manner, adequate time must be allowed for it to reach the colon and rectum before the first normal well-formed stool results.

The role of Cellothyl

Cellothyl is physiologically correct. Following the normal digestive gradient, it passes through the stomach and small intestine in a fluid state, then thickens to a smooth gel in the colon to provide bulk where bulk is needed for soft, moist,

easily passed stools.

The presence of sufficient physiologically correct bulk stimulates intestinal motility and mass reflex, and "in the course of a few days . . . more normal bowel habits"⁴ may be resumed.

Dosage: 3 Tablets t.i.d., each dose with a full glass of water, until normal stools pass regularly. Then reduce to minimum levels for as long as required. Daily fluid intake must be high.

To "wean" the cathartic addict, $\frac{1}{2}$ the usual dose of cathartics is given together with Cellothyl for several days, then $\frac{1}{4}$ the usual dose, then Cellothyl alone.

Cellothyl®

brand of methylcellulose
especially prepared by the Chilcott Process



Cellothyl Tablets (0.5 gram) in bottles of 50, 100, 500 and 5000.

Cellothyl Granules, for pediatric use, in bottles of 25 and 100 Grams.

Are you using the
"7 Rules" for
constipation correction?

CHILCOTT
Laboratories DIVISION OF The Maltine Company

MORRIS PLAINS, NEW JERSEY



**GOOD
RESULTS
REPORTED**

in Intractable Dysmenorrhea

Filler in J.A.M.A.¹ reports remarkably good results in the treatment of intractable functional dysmenorrhea when methyltestosterone is administered for the six days preceding ovulation. The gratifying relief of pain in this series is attributed to the use of methyltestosterone at this particular time of the cycle. It should be noted that there was no masculinization nor interference with ovulation.

The most economical and efficient method of administering the male hormone is with Metandren[®] Linguet.[®] This unique form of

methyltestosterone is specially shaped to fit comfortably between the gum and cheek and is highly compressed to insure slow, effective absorption of the hormone through the oral mucosa.

Suggested Dosage: One 5 mg. Linguet (equivalent to one 10 mg. tablet orally) three times daily for six days before estimated time of ovulation. *Metandren Linguet:* Issued in 5 mg. (white), 10 mg. (yellow), scored. Ciba Pharmaceutical Products, Inc., Summit, N. J.

1/16298
3. Filler, W.: J.A.M.A., 143: 1235 (Aug. 5) 1950.

METANDREN LINGUETS

PROBLEM: An injured waitress was referred by the restaurant's manager to one of the doctors listed by her employer's workmen's compensation insurer. The treatment was ineffective and she consulted plaintiff, a doctor not listed by the insurer. Plaintiff asked the manager by phone whether it was all right to treat her. The manager replied that it was, if the patient would retain the physician. The employers had instructed the manager to use only doctors listed by the insurer. Was plaintiff entitled to be paid a fee by the employers?

COURT'S ANSWER: Yes.

The Municipal Court of Appeals, District of Columbia, decided that the manager had plainly authorized plaintiff to treat the patient at the employers' expense; that this was within the scope of his apparent authority as manager of the restaurant; and that plaintiff had a right to rely upon his power in this regard, not knowing that the manager had been instructed to stick to the insurer's list of doctors (66 Atl. 2d 523).

PROBLEM: California municipal authorities did not question a doctor's right to use his Beverly Hills home as an office in preparing material for a newspaper syndicate. Did his additional activity of mailing about 150,000 pamphlets annually to readers of his column in answer to their requests constitute a publishing business prohibited by a zoning ordinance?

COURT'S ANSWER: No.

Evidence showed that the expense of issuing the pamphlets exceeded the receipts from fees charged to cover the cost of printing and mailing and that this service was a mere incident to the doctor's activity in authoring syndicated articles (215 Pac. 2d 453).



Before

After 21 days

for ECZEMA

The success of a coal tar ointment in ECZEMA THERAPY depends upon *continuity* of use for ten to twenty days or more. But *black* coal tar has a repulsive appearance and odor, stains clothing and linens, and may burn or irritate the skin. These objections make continuity of application hard to enforce.

SUPERTAH (Nason's) overcomes such difficulties. It is **WHITE**, almost odor-free, and non-staining, non-burning, non-irritant, non-pustulant. It need not be removed when renewing applications.

At the same time an authority reports SUPERTAH "has proven as valuable as the black coal tar preparation";* and a survey of U. S. physicians reveals 88.1% of those prescribing SUPERTAH found it produced "Good Results"!**

*Swarts & Reilly, "Diagnosis and Treatment of Skin Diseases", p. 66.

**Survey made by independent research organization; details on request.

Distributed ethically in original 2-oz. jars, 5% or 10% strengths. Complimentary sample sent on request.



TAILBY-NASON COMPANY

Kenmore Square Station, BOSTON 42, MASS

FORENSIC MEDICINE

PROBLEM: Allegedly, a county medical society wrongfully terminated a contract under which plaintiff was exclusive agent to write accident and health insurance for the members and for settling claims under such policies. The insurance business was transferred to another agent and company. Could plaintiff maintain suit brought more than three years after his dismissal against the society and persons who induced the society to break the contract, on a theory that there was a continuing wrong as members canceled policies secured through plaintiff?

COURT'S ANSWER: No.

The New York Supreme Court for New York County decided that the contract was definitely and finally broken when the society adopted a resolution dismissing plaintiff and that the statutory three-year period

within which suit could be brought for damages commenced to run from that date (96 N.Y. Supp. 2d 286).

PROBLEM: A veteran was placed in an electric cabinet bath for treatment for rheumatic disability and kept there until severely burned, although he had complained of faintness and dizziness. Was the United States and all personnel of a veterans' hospital concerned in the treatment liable for injuries sustained by the man?

COURT'S ANSWER: Yes.

The U.S. District Court for Nevada rejected a contention by the government that the federal tort claims act did not cover such a case (92 Fed. Supp. 360).

TENSOR*



ELASTIC BANDAGE

is woven with *Live*
Rubber Thread

TENSOR exerts uniform pressure but doesn't bind. TENSOR keeps its elasticity its whole life through. TENSOR is lightweight and porous, permits free motion while giving support. And TENSOR offers all these advantages because it's woven with LIVE RUBBER THREAD.

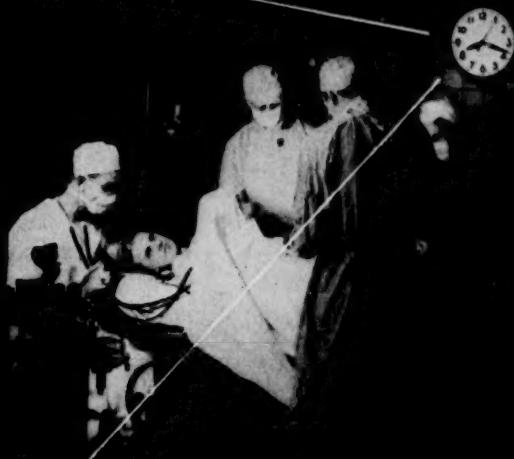
You can recommend TENSOR wherever an elastic bandage is indicated. There is no better elastic bandage.

BAUER & BLACK
Division of The Kendall Company, Chicago 16

FIRST IN ELASTIC SUPPORTS

*Reg. U. S. Pat. Off.

FAST ACTING



*added safety for the patient
greater control for the surgeon*

In its fast acting control of hemorrhage, KOAGAMIN affords a clearer field for surgery. It reduces bleeding in minutes, regardless of the cause. When Vitamin K is given, it is usually indicated only when prolonged prothrombin time is a factor. When given in conjunction with Vitamin K in oil form, KOAGAMIN effects more rapid control.



PREOPERATIVELY POSTOPERATIVELY THERAPEUTICALLY

minimizes oozing

controls secondary bleeding

advantage of internal bleeding

An aqueous solution of kaolin and magnesium citrate, KOAGAMIN controls hemorrhage rapidly and effectively. When used preoperatively, it minimizes oozing and controls secondary bleeding. When used postoperatively, it controls hemorrhage and minimizes oozing. When used therapeutically, it controls hemorrhage and minimizes oozing.

Supplied in 10 cc. diaphragm stoppered vials.
Comprehensive dosage chart and literature on request.



CHATHAM PHARMACEUTICALS, INC.
NEWARK 2 NEW JERSEY U.S.A.

Available through your Physician Supply House or your Pharmacist.

RIASOL in



BEFORE USING RIASOL

THOUSANDS PRESCRIBE RIASOL

RIASOL CONTAINS 0.45% MERCURY CHEMICALLY COMBINED WITH SOAPS, 0.5% PHENOL AND 0.75% CRESOL IN A WASHABLE, NON-STAINING, ODORLESS VEHICLE

APPLIED LOCALLY—SIMPLE TO USE

PSORIASIS

AFTER USING RIASOL

SEND FOR A CLINICAL PACKAGE
PROVE RIASOL YOURSELF
SHIELD LABORATORIES

12860 MANSFIELD AVENUE DETROIT 27 MICHIGAN

Washington Letter

Nation's Health Services Undergoing Many Changes

Whether the international situation grows better or worse in the months ahead, the country's various health services never will be quite the same again. Observing the scene in and from Washington, changes are apparent in every direction—with still more to come. Results may be better, and cheaper, medical care for more people, or lowered standards and a general deterioration of health services. No one is in a position now to say what the final conditions will be, or can anyone claim that the transition could be avoided.

Here are highlights of current pro-

gress, and a few of the questions and problems posed for the future:

MILITARY. Before the Korean fighting, military medical problems were being resolved, not always simply, but at least without many crises. Now, not only is there a serious shortage of military physicians, but the eventual prospect is so bleak that an entirely new concept of national service has developed.

This is reflected in plans for creation of a national medical academy whose graduates would provide a constant flow of physicians for military and other government services. The legislation along this line so far has made no progress, but the theory is receiving serious consideration.

The emergency has also turned attention to our medical reserves and their peculiar situation. By last July there were approximately 30,000 of them—enough to take care of all military requirements surely for several years. But, rather than call these men back, the Defense Department preferred to see a doctor



"It all started with a perfume called 'Surrender.'"

More physicians in more countries are now prescribing Numotizine because...

...Comforting relief from congestion, pain and swelling in inflammatory conditions is basic.

...Numotizine Cataplasma is externally applied, and is effective over many hours.

...Specific antibiotic and chemotherapeutic therapy is enhanced by the palliative effectiveness of Numotizine.

We shall be pleased to send a clinical trial supply on request.

Ethically Presented

For clinical sample, just write "Numotizine" on your card, letterhead or Rx blank, and mail to us.

NUMOTIZINE, INC.

900 N. Franklin Street

Chicago 10, Illinois

draft law enacted to bring nonveterans into the service. Yet, before the draft could become effective, several hundred reserves with World War II service had to be returned to duty.

Most of the reservists didn't like it. To their complaints, the military had one stock answer, used only reluctantly. It was: "A man remains in the reserves of his own free will; his presence there indicates he is willing and ready to serve when needed. The need is now." The reserve, however, doesn't help to insure an adequate and competent medical corps in the future.

The rights and duties of medical reserves are in need of careful review. Unless the situation is looked into with a degree of understanding, some reserve officers say, the services can expect to see their medical reservists resign their commissions and melt away as soon as they get the chance. One Defense Department

committee is studying the problem, but if a solution has been found it hasn't been announced.

LEGISLATION. The understanding is that the administration will allow plans for compulsory health insurance to lie dormant during the emergency, along with some other Fair Deal domestic reforms. But this has not quenched all partisan fires. The question of whether, and to what extent, the federal government should come to the aid of medical schools will be up for decision again in the next Congress. Sponsors of this legislation now can argue that we will have the present doctor shortage as a problem until their bills pass.

Even the Defense Department has taken an official stand in favor of extending help to medical, dental, and allied schools. The American Medical Association, which has been

(Continued on page 48)

Doctor to Doctor

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent \$5. The Dec. 1 winner is

*W. P. Farber, M.D.
St. Petersburg, Fla.*

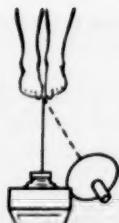
Mail your caption to
The Cartoon Editor
Caption Contest

No. 2

MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.



"That bachelor you said was sterile is out there with a very large little woman."



*Single light
at camera,
level with
camera lens.*



*Kodak products for
the medical profession include:*

X-ray film, screens, and chemicals; electrocardiographic papers and film; cameras and projectors—still- and motion-picture; photographic film—full-color and black-and-white (including infrared); photographic papers; photographic processing chemicals; microfilming equipment and microfilm.

through Photography and Radiography

Kodak
TRADE-MARK

WASHINGTON LETTER

critical of most bills on this subject in the past, has not indicated what its future course will be.

PUBLIC HEALTH AND GRANTS. A few federal health programs, notably hospital construction grants, have suffered and will continue to suffer while the emergency continues. The retractions almost certainly will be more than offset in the months ahead by ample grants for work associated with civil defense and military preparations—mass screenings, venereal disease and tuberculosis control, and rehabilitation of the handicapped.

In anticipation of new responsibilities, some U.S. Public Health Service departments already have shifted their sights. They are moving out of peacetime activities and finding urgent assignments in military or civil defense fields. While threat of war continues, huge sums of

money will have to be poured into bacteriologic warfare research, in both defensive and offensive phases.

VETERANS CARE. In activities of the Veterans Administration, the national emergency has effected changes that neither Congress, the President, nor the Budget Bureau dared attempt. With half or more of VA staff physicians members of the military reserves, VA has a desperate problem. Furthermore, Army and Navy have turned back several thousand VA cases which were being cared for in military hospitals.

The result is that VA has been forced to reverse a trend that has persisted for years: Now it is admitting fewer and fewer non-service connected cases for treatment. Before the emergency, more than three-quarters of VA beds were occupied by men whose injuries or illnesses did not result from military service. The policy of caring for more and more similar cases might be resumed after the emergency—or it might not.

HOSPITALS. Not only are general practitioners scarce; military medical demands also are calling from civilian life roentgenologists and other specialists and technicians whose services are considered essential to a modern hospital. Just one example: Army has withdrawn several hundred physicians from residencies in civilian hospitals and assigned them to duty with troops.

Even before the Korean situation, small hospitals found existence a struggle, because skilled personnel, including nurses, were hard to find and still harder to keep. The sup-



"That's question No. 16, you have four more to go."

(Continued on page 52)

KO'S

EXPENSES EARNINGS WORRY

YOUR

BOOKKEEPING PROBLEMS

TAXES

WITH HISTACOUNT

More doctors use "Histacount" than any other system. It eliminates all bookkeeping and tax problems; gives your financial status at a glance... what you earn, collect and spend. Enjoy simple, accurate, complete bookkeeping with "Histacount".

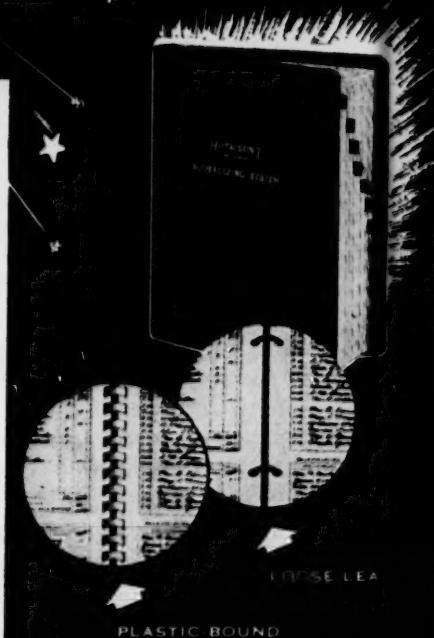
REGULAR EDITION

More than 400 pages for daily, monthly and yearly entries... special forms for taxes. Cloth cover, monthly indexes for easy reference. Loose-leaf or plastic-bound. (Refills for Loose-leaf - \$3.75) **\$7.25**

LIMITED PRACTICE SYSTEM

Same as the regular system but designed to care for practices limited to 90 patients per week. The finest little system of them all. Complete instructions included. Plastic-bound only.

\$4.50



PROFESSIONAL
PRINTING COMPANY, INC.
202 TILLARY ST., BROOKLYN 1, N. Y.

Gentlemen: Send me at once:

Regular Bookkeeping System @ \$7.25
 Loose-leaf Plastic-bound
 Refill for the Loose-leaf @ \$3.75
 Limited Practice System @ \$4.50
Send Prepaid C. O. D.
 FREE descriptive booklet

Dr. _____

Address _____

2-12-0

Now—with Chlorophyll . . .

A tissue-stimulating

Chloresium Powder

**Promotes healthy granulation tissue at the ulcer site—
gives prompt, soothing symptomatic relief.**

A new and fundamental approach to the treatment of chronic and acute peptic ulcers is made possible by Chloresium Powder.

Perfected after 3 years of research by Rystan Co., originator of therapeutic water-soluble chlorophyll preparations, this combination product assures prolonged contact of *tissue-stimulating chlorophyll* with the ulcer crater.

Clinical evidence shows that it offers six distinct advantages:

1. Promotes healthy granulation tissue at the ulcer site.
2. Gives prompt symptomatic relief.
3. Provides a prolonged protective coating.
4. Provides prompt antacid action—no alkalosis, no acid rebound, no interference with bowel regularity.
5. Completely safe, absolutely non-toxic.
6. Minimizes—often eliminates—need for special diets and restricted activity.



Chloresium Powder provides prolonged contact of tissue-stimulating chlorophyll with the ulcer crater.

How it works

A three-way combination product, Chloresium Powder provides the antacid and protective actions of the usual peptic ulcer preparations with aluminum hydroxide and magnesium trisilicate in a specially prepared dehydrated okra base. *The addition of the water-soluble derivatives of chlorophyll "a" gives you a healing therapy that actually promotes healthy granulation tissue at the ulcer site.*

therapy for peptic ulcers

Dramatic results in long-standing peptic ulcer cases

In a recently reported clinical series,¹ complete healing was obtained in 58 out of 79 cases of *long-standing* peptic ulcers within 2 to 7 weeks—with this new chlorophyll powder!

Chloresium Powder, in this clinical trial, demonstrated its effectiveness to the peptic ulcer patient quickly in the form of complete symptomatic relief. It demonstrated its effectiveness to the physician, under roentgenological examination, in prompt healing of the ulcer crater—usually in 2 to 7 weeks—even in cases which had been resistant to other therapy.

The minimum known history of the cases treated was two years. Many of the ulcers healed had resisted previous methods of treatment for from 5 to 12 years.

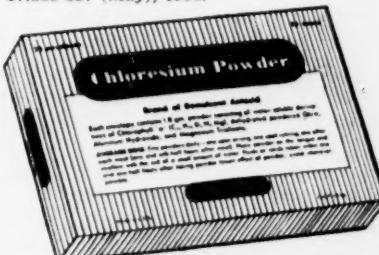
No special diets required

To avoid factors whose beneficial effects might be difficult to disassociate from the effects of the Chloresium Powder, no special diets were prescribed. There were no restrictions on smoking, alcoholic beverages or daily activity. Nevertheless, 3 out of 4 cases not only got lasting symptomatic relief in 1 to 3 days, but also obtained *complete healing of the ulcers* in 2 to 7 weeks.

These remarkable results—obtained with complete freedom from

dietary and other restrictions—indicate that here at last is a therapy which can be administered without upsetting the patient's normal habits and can thus greatly simplify the task of insuring patient co-operation. Moreover, Chloresium Powder is palatable and easily taken by the patient.

¹ Offenkrantz, W. F., *Rev. Gastroenterol.*, 17:359-367 (May), 1950.



Ethically promoted. Available at your druggist in slip-label cartons of 25 envelopes (25 doses).

Try it on your most difficult case
—mail coupon today!

FREE—5 DAYS' SUPPLY

RYSTAN COMPANY, INC., Dept. MM-8
7 N. MacQuesten Pkwy., Mt. Vernon, N.Y.

Please send trade-size sample of Chloresium Powder, and reprint of clinician's paper on chlorophyll therapy for peptic ulcers.

Dr. _____

Street _____

City _____ Zone _____ State _____

WASHINGTON LETTER

plies for hospitals are plentiful now, but emergency stockpiling will eat into these also.

How hospitals will be fitted into civil defense planning, and how these responsibilities will affect the hospitals will remain unsettled for many months.

CIVIL DEFENSE. Serving in national, state, and local civil defense organizations will be thousands of physicians, volunteer and salaried, closely linked together and to other civil defense activities. Working largely under direct or indirect supervision of these physicians, will be hundreds of thousands, probably millions, of health services volunteers, including first-aid workers, nurses' aides, home nurses, instructors, and the like.

For the first time, a nation-wide network integrating the country's health facilities and personnel is being created. Whatever is happening is happening fast.

Washington Notes

SELECTIVE SERVICE. technically, is not required to turn over drafted physicians to the Army until about December 9. Army requested 922, on October 9, and SS under the law should be given sixty days to fill an order.

ARMY'S DECISION to offer commissions to draft registrants at the time of their physical examination settled a touchy question. Military services had promised Congress that drafted physicians would be offered commissions, but some officials wanted to worry the men into asking for commissions.

While Gen. Lewis B. Hershey, Selective Service director, was making

headlines with ideas for changing student deferment policy, other SS officials were pointing out that there was no rush about it. SS already was deferring the top half, scholastically, of sophomore, junior, and senior college classes . . . Incidentally, trying to keep up with various estimates for military manpower, physicians included, is hopeless; invariably spokesmen are talking from conflicting sets of figures, and referring to conflicting dates.

INSISTENT CRITICISM of NSRB for not starting medical stockpiles in mid-fall finally brought a short, double explanation: No money, no authority. Critics forgot that NSRB, despite its prominence, had only planning and advisory power, virtually no right to act.

PRESIDENT TRUMAN and the Budget Bureau resisted heavy pressure in refusing to rescind the 50% cut in hospital program authorizations, from \$150,000,000 to \$75,000,000.

CONGRESSIONAL COMMITTEE surveying the state and local health services probably won't be able to file a report by the scheduled February 1 deadline. One big problem is the difficulty in separating health or medical care costs from general welfare expense in state and county budgets.

AFTER A SLOW START, Atomic Energy Commission's "Effect of Atomic Bombing" now is almost a best seller.

HAVE YOU A STORY?

MODERN MEDICINE pays \$1 for each anecdote about patients accepted for publication.

AUREOMYCIN HYDROCHLORIDE CRYSTALLINE

in Brucellosis



The chronic ill health and mortality associated with undulant fever, caused by one of the strains of brucellae organisms, has been a serious medico-social and economic problem in this country. The treatment of these infections in man can now be satisfactorily carried out with aureomycin.

AUREO-MYCIN

Aureomycin has also been found effective for the control of the following infections: acute amebiasis, bacterial and virus-like infections of the eye, *bacteroides* septicemia, boutonneuse fever, gonorrhea, Gram-positive infections (including those caused by streptococci, staphylococci, and pneumococci), Gram-negative infections (including those caused by the coli-aerogenes group), granuloma inguinale, *H. influenzae* infections, *Klebsiella pneumoniae* infections, lymphogranuloma venereum, primary atypical pneumonia, psittacosis, puerperal infections, Q fever, rickettsialpox, Rocky Mountain spotted fever, surgical infections, subacute bacterial endocarditis resistant to penicillin, tick-bite fever (African), trachoma, tularemia and typhus.

Capsules:

Bottles of 25 and 100, 50 mg. each capsule.
Bottles of 16 and 100, 250 mg. each capsule.

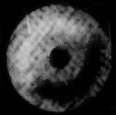
Ophthalmic:

Vials of 25 mg. with dropper; solution prepared by adding 5 cc. of distilled water.

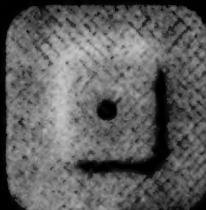
LEDERLE LABORATORIES DIVISION *AMERICAN Cyanamid COMPANY* 30 Rockefeller Plaza, New York 20, N. Y.

new elastic dressings

with the famous



spot



patch

strip

means....

name

© 1987 The Goodyear Tire & Rubber Company

stretch with every movement

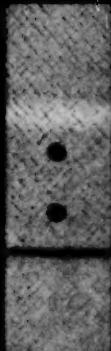
fit better • stay put • more comfortable

blend with skin

flesh color • inconspicuous

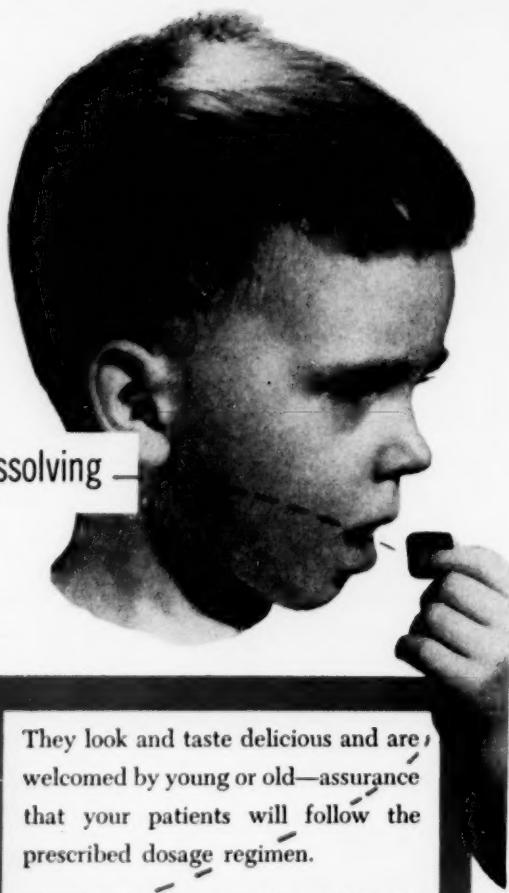
a size and shape for every need

individually wrapped • sterile • waterproof



...made by

20,000
units
of
penicillin
in a
slowly-dissolving —
hard candy
base



One Pondet
provides
high local
penicillin levels
lasting
a half-hour

They look and taste delicious and are welcomed by young or old—assurance that your patients will follow the prescribed dosage regimen.

PONDETS* PENICILLIN TROCHES

For local treatment and prophylaxis of oral infections caused by penicillin-sensitive organisms.

*Trade Mark

Wyeth Incorporated, Philadelphia 3, Pa.



M O D E R N M E D I C I N E

Hypercholesterolemia and Arteriosclerosis

S. J. THANNHAUSER, M.D.*

Tufts College, Boston

DISEASES of cholesterol metabolism can be adequately understood only if the following basic facts are kept in mind:

Cholesterol is supplied for the organism by food and by synthesis in the organs, primarily in the liver. Endogenous cholesterol is synthesized from low carbon chain metabolites derived from all food types. Hence, the restriction of any one kind of food cannot prevent cholesterol formation.

No enzyme of the intermediary metabolism of animals has been found which is capable of splitting the sterol skeleton. According to present knowledge, cholesterol destruction is accomplished in animals only by means of intestinal bacteria.

Cholesterol absorption is facilitated by the presence of neutral fat in the intestines. Man absorbs mainly cholesterol of animal origin. Herbivorous animals absorb both animal and vegetable cholesterol but are unable to excrete animal sterols. Animal cholesterol is retained and hypercholesterolemia develops. Herbivorous animals, therefore, should not be used for comparative experiments of cholesterol metabolism.

Cholesterol is excreted with the bile and directly into the intestines.

An abnormal accumulation of cho-

* Xanthomatosis. J. Mt. Sinai Hosp. 17:79-97, 1950.

lesterol in the serum, cells, or tissues occurs by means of one of three possible mechanisms.

1] Cholesterol infiltration into the cells. This process has as a prerequisite, hypercholesterolemia, which may be the result of either an imbalance of cholesterol synthesis and excretion or an increase in neutral fat in the serum.

2] Increased cholesterol synthesis within certain cells. The blood cholesterol is normal.

3] Extracellular precipitation of cholesterol, a result of local changes in the physical properties of the tissue.

The assumption has been made that cholesterol accumulation in the arterial intima, as observed in familial hypercholesterolemic xanthomatosis, is the first phase of arteriosclerosis. However, S. J. Thannhauser, M.D., is of the opinion that arteriosclerosis has no primary etiologic connection with cholesterol metabolism. The following clinical observations support this concept:

► Clinical features of premature development of arteriosclerosis are not found in patients with familial hypercholesterolemic xanthomatosis.

► Although coronary disease is common to both disorders, coronary involvement is not presumptive evi-

MEDICINE

dence of arteriosclerosis and may occur in several vascular diseases.

► The cholesterol content of sera of patients with arteriosclerosis is usually normal.

Arteriosclerosis is a disorder affecting the elastic structures and ground substance of the vascular wall. The precipitation of cholesterol is a secondary process caused by the physical properties of the altered tissue.

The cause of this alteration is unknown. Wear and tear processes, dependent upon constitutional hereditary factors, and diminished oxygen supply from changes in the *vasa vasorum* have been postulated as factors involved in this disease. Arteriosclerosis occurs with diabetes, probably as a result of the noxious influence of abnormal carbohydrate

metabolism upon the vascular tissue.

Familial hypercholesterolemia is due to a disturbance of cholesterol formation and excretion. The atheroma of the arterial intima found in this disease is a localized process similar to that of the skin xanthoma. Both processes result from cholesterol infiltration into the cells from the high cholesterol content of the serum.

Restriction of cholesterol intake will not basically influence the development of arteriosclerosis since this physiochemical process is independent of the cholesterol content of the serum. Cholesterol restriction is, however, desirable in familial hypercholesterolemia because the basis for the abnormal accumulation of serum cholesterol is a metabolic imbalance of cholesterol synthesis and excretion.

INTRAVENOUS ALBUMIN may produce congestive heart failure within one week in healthy young men receiving as little as 50 gm. daily. Therefore, nutritional supplements should be given with great caution if the circulatory reserve is low, warn Nicholas S. Gimbel, M.D., Cecilia Riegel, M.D., and William W. L. Glenn, M.D., of the University of Pennsylvania, Philadelphia, and Yale University, New Haven, Conn. Unless serum albumin is actually depleted, the imminence of complications seriously limits the use of large amounts of albumin.

J. Clin. Invest., 29:998-1009, 1950.

DISEASES RESPONSIVE TO ACTH also may be relieved by HPC, chemically designated as 3-hydroxy-2-phenylcinchoninic acid. For severe acute rheumatic fever, K. C. Blanchard, M.D., and associates of Johns Hopkins University, Baltimore, give 20 mg. per kilogram every day for a week or two. Fever, malaise, and arthritis rapidly subside, although relapse may occur. Chronic rheumatoid arthritis is subjectively and in some cases measurably ameliorated by comparable doses. Lupus erythematosus may be improved, but bronchial asthma is apparently unaffected.

Bull. Johns Hopkins Hosp., 87:50-60, 1950.

The Normal Blood Pressure Range

ARTHUR M. MASTER, M.D.

College of Physicians and Surgeons, Columbia University

LOUIS I. DUBLIN, PH.D., AND HERBERT H. MARKS*

Metropolitan Life Insurance Company, New York City

COMMONLY accepted limits for normal blood pressure may be too narrow. Frequently, high readings represent aging rather than specific disease. In other cases, the blood pressure level may be the result of, and incidental to, cardiac disease.

From analysis of 15,706 industrial case records, Arthur M. Master, M.D., Louis I. Dublin, Ph.D., and Herbert H. Marks find that the mean blood pressure readings, both systolic and diastolic, increase with age for both men and women. The systolic pressure becomes progressively higher up to the age of fifty, after which the increase accelerates.

For boys between sixteen and nineteen years old, an upward trend is observed, but for girls of the same age interval, the blood pressure remains unchanged.

In men, pressures range from an average of 118.4/72.9 at the age of sixteen years to 141.8/84.5 at ages sixty to sixty-four. Among women, the range of averages is from 115.1/71.1 at nineteen years to 144/85 in the ages of sixty to sixty-four. Up to forty-five years of age the average pressures for men are higher than those of women but, beyond this age, the differences are slight. The range of the readings

increases absolutely with age, and absolutely and relatively is greater for women than for men at ages over forty.

No clearcut relationship was found between height and blood pressure, although systolic blood pressure is somewhat higher for tall men below the age of forty.

The averages of systolic and diastolic blood pressure are progressively higher with increase in weight, regardless of age or sex.

Hypertension of slight degree is frequent at comparatively young ages, particularly among men, one-fifth of whom between the ages of twenty and twenty-nine have readings of 140/90 or over. For middle-aged and old persons this degree of hypertension was common.

Blood pressures of 140/90 or over are present in about 40% of both men and women at ages forty-five to forty-nine and in 60% at ages sixty to sixty-four. Readings of 150/100 or over are found in nearly 20% of persons by the age of forty-five, and in over 35% between the ages of sixty and sixty-four. Before forty-five, hypertension is more common in men; after that age women are more frequently hypertensive. High systolic blood pressures and slightly to moderately elevated diastolic pres-

* The normal blood pressure range and its clinical implications. *J.A.M.A.* 143:1464-1470, 1950.

MEDICINE

NORMAL RANGE AND LIMITS OF HYPOTENSION AND HYPERTENSION

Sex Age	Hypotension Upper Limit		Normal Range		Hypertension Lower Limit		Diastolic*		Normal Range		Hypertension Lower Limit	
	Systolic*	Diastolic*	Hypotension Lower Limit	Hypertension Upper Limit	Hypotension Lower Limit	Hypertension Upper Limit	Normal Range	Hypotension Lower Limit	Normal Range	Hypotension Lower Limit	Normal Range	Hypotension Lower Limit
<i>Males</i>												
16	98	105-155	145	52	60-86	90						
17	98	105-155	145	55	60-86	90						
18	98	105-155	145	55	60-86	90						
19	98	105-140	150	55	60-88	95						
20-24	98	105-140	150	56	62-88	95						
25-29	100	105-140	150	60	65-90	96						
30-34	100	110-145	155	60	68-92	98						
35-39	102	110-145	160	60	68-92	100						
40-44	102	110-150	165	60	70-94	100						
45-49	104	110-155	170	60	70-96	104						
50-54	105	115-160	175	60	70-98	106						
55-59	106	115-165	180	60	70-98	108						
60-64	108	115-170	190	60	70-100	110						
<i>Females</i>												
16	95	100-150	140	55	60-85	90						
17	95	100-150	140	55	60-85	90						
18	95	100-150	140	55	60-85	90						
19	95	100-150	140	55	60-85	90						
20-24	95	100-150	140	55	60-85	90						
25-29	98	102-150	140	55	60-86	92						
30-34	98	102-155	145	55	60-88	95						
35-39	100	105-140	150	60	65-90	98						
40-44	100	105-150	165	60	65-92	100						
45-49	100	105-155	175	60	65-96	105						
50-54	105	110-165	180	60	70-100	108						
55-59	105	110-170	185	60	70-100	108						
60-64	105	115-175	190	60	70-100	110						

* Blood pressure readings in millimeters of mercury.

sures are found in the majority of persons of sixty or over.

Low blood pressure is noted most frequently in young adults and declines steadily with age. The incidence of hypotension is higher for women in all age groups.

The mean value for blood pressure readings for every age group was calculated, and 80% of the area around the mean was considered the normal range. All values outside two standard deviations from the mean, 95% of the area around the mean, were considered abnormal, that is, pressures above the lower limit of hypertension for elevated values and below the upper limit of hypotension for low values. The areas between the hypotension upper limit and normal range and the hypertension lower limit and normal range represent borderline values and are considered as probably normal (see table).

Blood pressures that are usually considered above normal are not uncommon up to the age of forty and, after forty-five, elevated readings are more frequent than some so-called normal values. In the older age groups, systolic pressure of 180 or 190 and diastolic values of 100 or 110 should not be considered abnormal, but may reflect the degree of arteriosclerosis present.

The tables should not be used too literally, but should be interpreted in each case in the light of the history, the physical examination, the size of the heart, and the electrocardiograms of rest and after exercise.

REACTIONS TO BAL are much decreased by 50 mg. of Benadryl given orally half an hour before injection. Severe nausea and vomiting, abdominal cramps, generalized aches and pains, flushing, tingling, and other untoward symptoms are reduced or entirely prevented. Howard L. Holley, M.D., of the Medical College of Alabama, Birmingham, finds that addition of the antihistamine does not lessen the effectiveness of BAL in therapy of arsenic poisoning.

Am. J. Syph., Gon. & Ven. Dis. 34:490-492, 1950.

Adenoma of the Islands of Langerhans

HERBERT A. PERKINS, M.D., JANE F. DESFORGES, M.D.,
AND CHARLES G. GUTTAS, M.D.*

Boston City Hospital

IN 90% of cases, hypoglycemia is caused by tumor of the islands of Langerhans, functional hyperinsulinism, or liver disease.

Liver disease and the less common causes of hypoglycemia, such as Addison's disease, hypopituitarism, lesion of the central nervous system, postgastrectomy syndrome, and renal glycosuria, can easily be distinguished. The diagnostic problem, therefore, is usually that of deciding between adenoma of the pancreas and functional hypoglycemia without morphologic pancreatic changes.

Cerebral function rapidly becomes impaired when adequate glucose is not available. Hence, the most dramatic manifestations of hypoglycemia are neurologic, for the most part depending on diffuse cerebral dysfunction, such as headache, restlessness, convulsions, drowsiness, personality changes, and coma.

Focal disorders in the form of diplopia, paralyses, aphasia, sensory disturbances, tremors, and incoordination occur. Autonomic abnormalities include sweating, pallor, flushing, and chilliness. Appetite is usually increased, and gastrointestinal symptoms may arise. Tachycardia, cardiac arrhythmias, and angina pectoris have been noted.

The above symptoms are transi-

tory and disappear promptly with the administration of glucose. If hypoglycemia is prolonged and extreme, however, neurologic manifestations may persist for several hours or days. Repeated severe episodes may result in permanent pathologic changes in the brain with associated mental deterioration, convulsions, and the like.

No absolute single criterion is known for distinguishing between adenoma of the islands of Langerhans and functional hypoglycemia. The clinical history may be helpful. In functional cases, the symptoms vary in intensity and frequency, while those caused by adenoma are typically progressive. In the organic type, attacks occur in the fasting state as well as two or three hours after a meal; in the functional type, attacks before breakfast are rare. Functional hypoglycemia appears most often in people who are hyperreactors to other stimuli.

The glucose, insulin, and epinephrine tolerance tests are useful in demonstrating abnormal carbohydrate metabolism, but results are sometimes misleading instead of helpful in distinguishing functional from organic hypoglycemia. Herbert A. Perkins, M.D., Jane F. Desforges, M.D., and Charles G. Guttas, M.D.,

* Adenoma of the islands of Langerhans: its differentiation from functional hypoglycemia. *New England J. Med.* 243:281-285, 1950.

point out that the most important single differential sign in the diagnosis of islet cell tumor is the occurrence of a blood sugar level below 50 mg. per 100 cc. after prolonged fasting.

The hypoglycemic seizure is successfully treated by the immediate administration of intravenous glucose. The attacks of functional hypoglycemia are usually abolished or greatly diminished when the pa-

tient eats foods of high-protein, low-carbohydrate content.

When dietary treatment fails and the symptoms are sufficiently severe, surgical exploration is indicated. A temporary diabetic state may follow the removal of an adenoma, a circumstance which signifies that the operation was a success. When no tumor can be found, subtotal pancreatic resection may result in abolition of the hypoglycemic attacks.

Antibiotic Treatment of Amebiasis

HARRY MOST, M.D., J. W. MILLER, M.D.,
AND E. J. GROSSMAN, M.D.*

ACUTE attacks of amebic colitis are usually checked by bacitracin or aureomycin, and in most cases *Endamoeba histolytica* is eliminated.

Since enterococci and *Clostridia* uniformly disappear during therapy, intestinal bacteria may be partly responsible for protozoan growth and pathogenic effect. Antibiotics apparently destroy an essential relation between amebae and intestinal flora or obliterate organisms in amebic lesions.

Harry Most, M.D., J. W. Miller, M.D., and E. J. Grossman, M.D., of New York University and the Veterans Administration, New York City, give 80,000 units of bacitracin daily by mouth for ten days. Approximately two-thirds of patients recover permanently after a single course.

Bacitracin may succeed after failure of emetine, iodoquinoline, carbarsone, chloroquine, or aureomycin. The most severe lesions heal in about two weeks, and no toxic reactions occur. Amebae may recur a few days or months later, but relapse is often symptomless.

Aureomycin dosage is 2 gm. daily for ten days. Results are even more promising than with bacitracin, since amebiasis is eradicated in 93% of cases. However, nausea and vomiting occur in 20%. *E. histolytica* seems to be unaffected by Chloromycetin and is seldom inhibited by polymyxin B.

* Treatment of amebiasis with bacitracin and other antibiotics. Am. J. Trop. Med. 30:491-497, 1950.

Plastic Repair of Breast Malformations

H. O. BAMES, M.D.*

Hospital of Good Samaritan and Hollywood Presbyterian Hospital, Los Angeles

THE physical and psychologic distress incident to excessively large or small breasts can be alleviated by surgical means.

H. O. Bames, M.D., recognizes three types of deformities: [1] hypomastia or underdevelopment, with the organ small in form, size, or extent and frequently flabby or pendulous; [2] hypermastia, or overdevelopment to 2 and 3 times normal, and [3] gigantomastia, or enlargement beyond the limits of hypermastia.

Two patterns of procedure are followed in all mammoplasties, one involving the skin and subcutaneous tissue, and the other involving the breast mass.

The first method determines the future location of the malpositioned nipple and areola and includes undermining the covering skin flaps which, in healing, produce a scar tissue network, an inbuilt brassiere. The skin pattern is identical for all three types of malformations.

The second technic governs the revision of the breast tissue. To correct gigantomastia, practically complete amputation is done, with free transplantation of the nipple and areola. The excess tissue is resected for patients with hypermastia; nipple and areola are left intact with the remaining breast mass.

* Breast malformations and a new approach to the problem of the small breast. *Plast. & Reconstr. Surg.* 5:499-506, 1950.

For hypomastia nothing is resected and any available breast tissue is advantageously redistributed (see illustration).

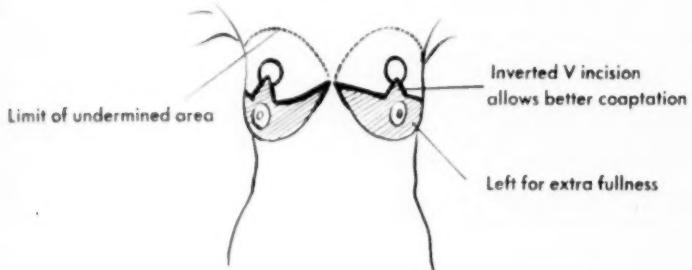
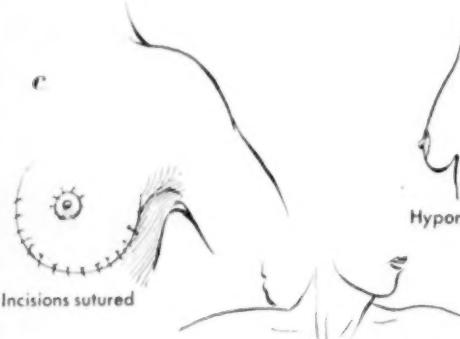
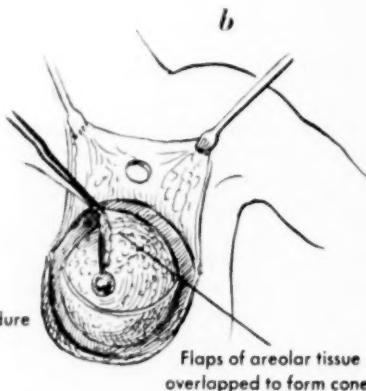
The technic is as follows:

The skin incisions are marked by brilliant green. The skin is separated from the breast by blunt dissection and reflected upward. The breast is incised through and through from the areola to the upper pole; two flaps of breast tissue are then freed from the underlying pectoral fascia (Fig. a).

The lateral flap is retracted as far medially as possible and anchored with cotton sutures to the fascia. Next the medial flap is pulled laterally and superimposed on the lateral flap (Fig. b). The breast mass is then shifted into the previously undermined bed and secured high on the chest wall by cotton sutures in the fascia.

Next, the crescent-shaped portion of skin in the lower third of the breast is denuded of superficial epithelial layer and buried as a dermagraft which rapidly becomes fibrous tissue, providing good filling and supporting material and preventing future sagging. Good results have also been obtained using derma-fat grafts obtained in lipectomies from more bulging areas of the body as free transplants to build up breast

CORRECTION OF HYPMASTIA



volume. Pure fat grafts, however, are unsatisfactory.

The nipple and areola are transplanted and fixed in the buttonhole circular incision (Fig. 5). The breast has thus been transformed into a

firm, full, compact structure with a distinctly conical configuration.

Lactation is probably not harmed by the procedure, and the breast is restored as a secondary sexual characteristic.

Coagulation of Serum in Cancer Diagnosis

CHARLES HUGGINS, M.D., ANNE S. CLEVELAND,
AND ELWOOD V. JENSEN, PH.D.*

CANCER frequently impairs or reduces serum albumin and increases the proportion of gamma globulin. Such changes are easily shown with thermal coagulation tests employed by Charles Huggins, M.D., Anne S. Cleveland, and Elwood V. Jensen, Ph.D., at the University of Chicago.

Since abnormal results are obtained in 85% of cancer cases, serum albumin is a valuable diagnostic aid. However, the test is not specific for carcinoma, since similar effects are often obtained with other diseases, after major surgery, and during advanced pregnancy.

When albumin is deficient, serum cannot be diluted as far as normal specimens before clotting power disappears. As a spot test, 0.21 cc. of serum is mixed with 0.79 cc. of 15th molar phosphate buffer, pH 7.4, and left in a boiling water bath half an hour.

After cooling, the coagulum is removed from the tube and placed on a wire screen. If no appreciable quantity of liquid drops within one minute, the serum is considered coagulated.

The test is repeated with six dilutions of serum: from 0.15 to 0.20% if a clot formed, 0.22 to 0.27% if serum remained liquid. The end point is the smallest proportion of serum to form a clot. Concentrations average 17.6% for healthy persons, higher when albumin is low.

Qualitative change of albumin is shown by the least coagulable concentration in relation to the actual amount of protein or albumin in 100 cc.

To estimate content of gamma globulin, 0.05 cc. of serum is mixed with 0.95 cc. of buffer and left in boiling water for two minutes. Normal serum becomes opalescent or hazy, and increased globulin produces a heavy cloud or solid particles.

* Thermal coagulation of serum in diagnosis. *J.A.M.A.* 143:11-15, 1950.

Acute Intestinal Obstruction

MARSHALL L. MICHEL, JR., M.D., LEONARD KNAPP, M.D.,
AND ARTHUR DAVIDSON, M.D.*

Tulane University, New Orleans

For proper management of mechanical ileus, the differences between obstructions of the small bowel and colon should be clearly understood.

The etiology, incidence, age at onset, pathology, laboratory and roentgen aspects, symptoms, and treatment differ for the two types, emphasizes Marshall L. Michel, Jr., M.D., Leonard Knapp, M.D., and Arthur Davidson, M.D.

As a rule, acute occlusion of the small intestine requires immediate removal of the cause as well as decompression. With blockage of the colon, however, the bowel is usually deflated as the primary procedure and the obstruction is eliminated by operation later.

SMALL INTESTINE

Obstruction of the small intestine is more frequent and less dangerous than that of the colon. In one hospital, small bowel obstruction was found to be 5 to 6 times as common as colic obstruction and fatal about half as often.

Blockage above the cecum results chiefly from postoperative adhesions and external hernia; less frequent factors are intussusception, foreign bodies, atresia, and volvulus. The most common site is the middle or

terminal ileum, a section with small lumen adjacent to frequent operative and hernial regions. The average age at onset is forty years.

The small intestine above the lesion becomes more and more distended by fluid and gas and may eventually be involved along the entire proximal length. The bowel wall is injured by edema, inflammation, ulceration, and ischemia.

Large amounts of plasma-like fluid escape into the lumen, and if treatment is neglected, body tissues and fluids are depleted. Dehydration, hemoconcentration, loss of blood chloride and protein, alkalosis or acidosis, vitamin deficiency, and azotemia may develop.

The classic symptoms are sudden violent cramping pain, nausea, and vomiting. In over one-fourth of cases, however, feces or flatus can be expelled after onset. Abdominal tenderness nearly always indicates strangulation, observed in 18% of instances.

COLON

Obstruction of the colon develops insidiously from carcinoma in about 62% of cases and as intermittent volvulus in about 20%. Diverticulitis and intussusception account for some 5% each.

* Acute intestinal obstruction. Comparative studies of small intestinal and colic obstruction. *Surgery* 28:90-110, 1950.

The structure most often blocked is the sigmoid or left colon, where the lumen is small, walls are relatively thick and inelastic, and contents more solid.

Distention is frequently limited to a single loop closed at one end by the lesion and at the other by the ileocecal valve. A large amount of fluid and gas collects but cannot back up, and severe metabolic imbalance is rare.

Since the closed loop becomes greatly dilated, however, the wall may perforate and fatal peritonitis develop.

Localized abdominal tenderness may be found over the distended cecum, directly over a cancerous or inflamed area, or over a twisted loop. Nausea and vomiting will not always occur, especially with a closed loop, and bowels may move after onset.

DIFFERENTIATION

Small and large bowel obstructions are frequently differentiated by radiography. Scout films are made in erect and supine positions to show distention and fluid levels, and a series may be spaced one to several hours apart. But dilatation is not always seen, and extreme degrees are hard to interpret. A barium enema does not result in perforation, if given with care, and generally defines colic lesions so that visualization is not difficult.

TREATMENT—SMALL INTESTINE

For all obstructions of the small intestine, fluid replacement should begin immediately and continue throughout the operation and the

critical postoperative period. Chlorides, glucose, Hartmann's solution, sodium lactate, and other substances are employed when necessary as well as whole blood.

A Miller-Abbott or similar tube decompresses the small intestine above the obstruction but is no substitute for operation. If the tube does not pass into the small bowel, suction from the stomach or duodenum may be satisfactory. If distention is extreme, the bowel may be deflated by needle aspiration. Delay of operation to improve the general condition is seldom necessary. If possible, the responsible lesion is removed, end-to-end anastomosis is performed, and exteriorization avoided.

TREATMENT—COLON

Immediate resection of the colon is done only for volvulus with gangrene or mesocolic thrombosis. Volvulus of the sigmoid without vascular changes may be corrected by insertion of a sigmoidoscope. After decompression, a soft rubber tube is inserted and left for two or three days.

In all cases, the Miller-Abbott tube is used or suction applied through the stomach or duodenum. For obstructive cancer or diverticulitis, the colon is decompressed surgically proximal to the lesion.

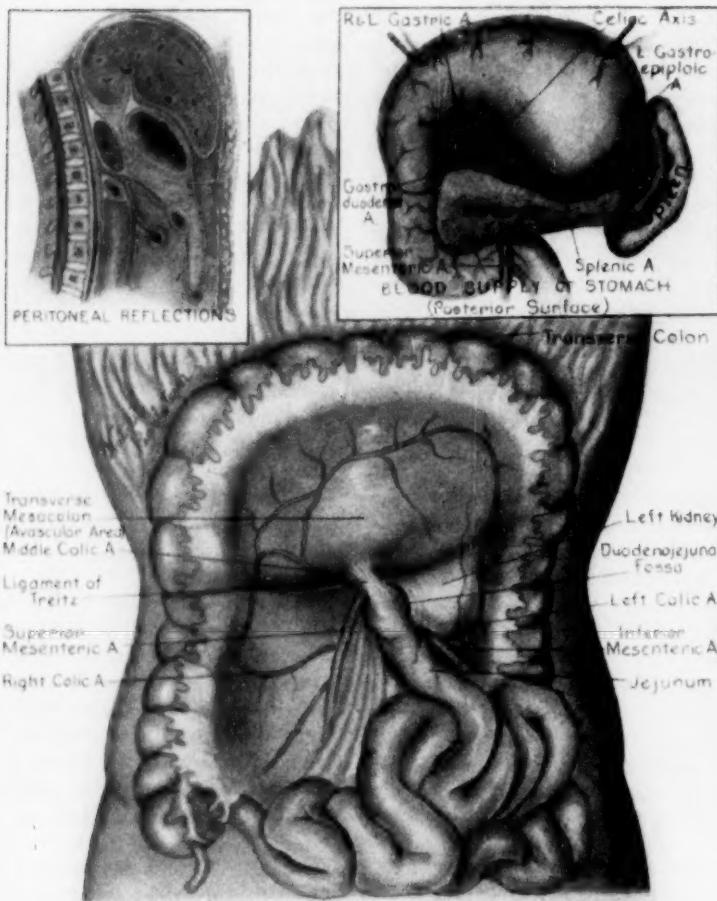
Obstructions of the left colon are removed with transverse loop colostomy, and closure is done sometime later.

Obstruction on the right requires an ileotransverse colostomy, with or without cecostomy. Colocolic intussusception is handled like the ileocolic form.

Posterior Gastrojejunostomy

F. M. AL AKL, M.D.

Kings County Hospital, New York



KEEP THIS PICTURE IN MIND

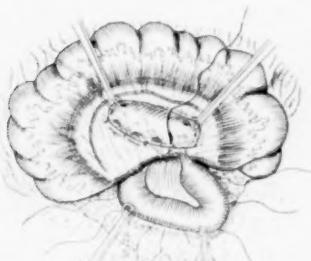
SURGICAL TECHNIGRAM



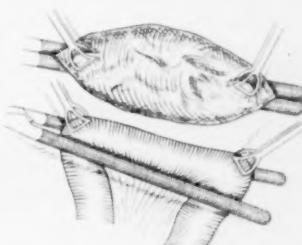
1. Open abdomen through upper midline incision. Lift transverse colon with overhanging omentum, slide right hand beneath transverse mesocolon, and deliver emerging jejunum into wound.



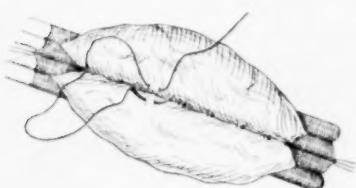
2. Apply two caliper clamps 4 fingers apart to antimesenteric border of jejunum 10 cm. from duodenojejunal junction; open window in transverse mesocolon to the right and beneath the middle colic vascular arch.



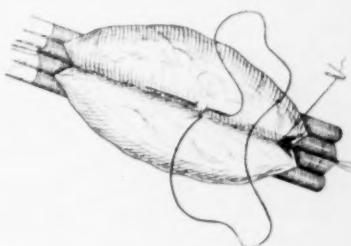
3. Pick up posterior stomach wall with two caliper clamps placed 4 fingers apart over long axis of presenting stomach; suture posterior edge of rent in transverse mesocolon to stomach.



4. Apply two rubber-shod clamps over stomach fold and over jejunal loop and anchor clamps together. Remove caliper clamps.

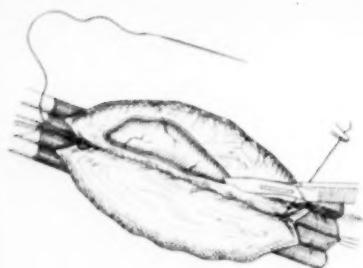


5. Approximate contiguous stomach and jejunal serous surfaces with interrupted sutures.



6. Introduce continuous suture into the serosa, 0.5 cm. proximal to end sutures and 0.5 cm. above suture line. Clamp free end of suture.

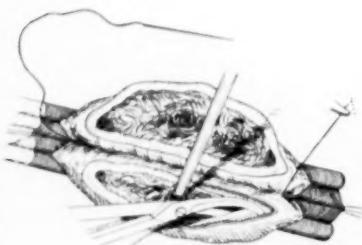
SURGICAL TECHNIGRAM



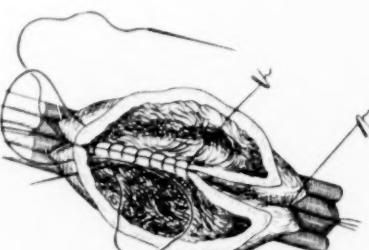
7. Lock continuous suture. Place needle in towel. Drape field with wet pads and incise stomach seromuscular coat 1 cm. above suture line.



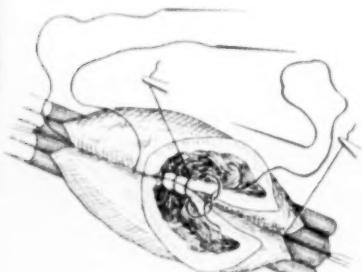
8. Ligate exposed vessels on cut edges of stomach.



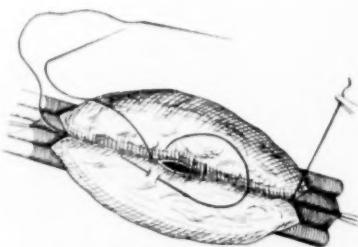
9. Scissor mucosal layer open. Aspirate lumen clean, and open the opposing jejunal lumen.



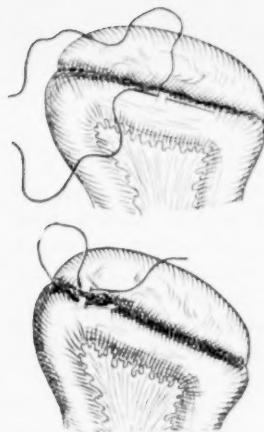
10. Place continuous hemostatic mattress suture approximating the contiguous stomach and the jejunal walls; convert mattress suture to an inverting suture at the corner.



11. Lock first suture halfway anteriorly; start a second suture similar to the first in the opposite direction.



12. Continue around corner and anteriorly, leaving the last few stitches loose until mucosa is adequately inverted, then tie suture ends together.



13. (Left) Remove gauze, release the rubber-shod clamps, pick up serosal suture, continue anteriorly, finally tying ends together.

14. Apply final serosal interrupted sutures, thus completing anastomosis.

15. (Right) Sew anterior edge of rent in transverse mesocolon to stomach wall beyond line of anastomosis. Reposit the omentum and the transverse colon; close abdomen in layers.



NOTES

This technic of posterior or retrocolic gastrojejunostomy may be modified to establish an anterior or antecolic anastomosis simply by swinging the first jejunal loop over the omentum-transverse colon mass and joining the jejunum to the anterior stomach wall.

Some operators dispense with the middle continuous suture and rely only on an inner all-layer continuous suture and an outer interrupted serosal suture. The suture material may be absorbable or nonabsorbable, except in the innermost layer, where only digestible material is allowable.

The use of rubber-shod clamps may simplify immobilization of the site of anastomosis and isolation of the lumens and reduce oozing from the cut surfaces. With experience, clamps may not be necessary. The end serosal sutures are clamped for traction, and suction is maintained to keep the field dry.

Even in obese patients, the transverse mesocolon is readily transilluminated and the silhouette of the middle colic artery readily seen. If

the vessel is not easily found, the peritoneum is centrally incised and a clamp opened into the fat to outline the window and expose the vessel. The middle colic artery may be injured and ligated with no ill effect. The bowel circulation is sufficient from the peripheral vascular arcade joining the right and left colic arteries, and branches of the superior and inferior mesenteric arteries, respectively.

The opening between stomach and jejunum should be at least 4 fingers in width. This allows for postoperative shrinkage, permits ready exchange of stomach and intestinal contents, and prevents the corrosive acid chyme from squirting through a small opening onto the jejunal wall.

Inadvertently, the stomach has occasionally been anastomosed to the ileum. Until thoroughly experienced, palpation does not suffice for identification of the jejunum. The duodenojejunal ligament and fossa should be visualized and the emerging jejunum clearly recognized before selecting the site of anastomosis.

Premenstrual Tension

JOSEPH H. MORTON, M.D.*

New York Medical College, New York City

THE cause of premenstrual tension is apparently inadequate progesterone secretion with consequent relative surplus of estrogen.

The endocrine derangement produces electrolyte imbalance with water retention, swelling of breasts and pelvic organs, and disturbed carbohydrate metabolism.

Hypoglycemia, believes Joseph H. Morton, M.D., accounts for the familiar complaints of emotional instability, weakness, and fatigue.

In 29 women aged twenty to forty-five years, premenstrual tension was greatly relieved by hormone replacement, diuretics, salt restriction, and a diet raising blood sugar.

The changes begin about ten to fourteen days before the menses. Nervous manifestations include depression, crying spells, anxiety, restlessness, insomnia, inability to concentrate, and mental confusion.

Breasts are usually swollen and sore. In over half the cases the abdomen is bloated and pain is felt in one or both lower quadrants, usually in the groin and more often on the right. Less frequently headaches or nausea and vomiting occur.

Abnormal appetite or craving for sweets is described in 3 of 5 instances. Sudden fatigue or faintness, uncontrollable trembling, and weakness are often experienced and are relieved by food.

* Premenstrual tension. Am. J. Obst. & Gynec. 60:545-552, 1950.

The face or legs may become puffy, and urine output is much less before than after menstruation. Fluid retention in extracellular spaces coincides with swelling of breasts and abdomen and with increase of body weight; 1 to 9 lb. may be gained.

As shown by the fluorescein test, capillaries frequently become more permeable over the breasts and to a lesser extent over the legs. Blood sodium and calcium may be slightly lowered and potassium raised, with reversal after the monthly flow.

Although fasting blood sugar is generally normal or only slightly reduced, glucose tolerance curves are often low or flat, and in other instances drop below normal or below the initial value in the fourth hour. Levels of 70 to 80 mg. per 100 cc. are often observed and occasionally less than 60 mg.; symptoms of insulin shock may develop. Tolerance curves are normal after the menses.

Hormone imbalance is demonstrated by failure of basal temperature to rise abruptly in midcycle, a sign of progesterone deficit, or by irregularities associated with diminished luteal activity. Just before or soon after onset of menses, the endometrium is often hyperplastic.

Premenstrual vaginal smears fail to show the luteal phase, and cornified cells persist throughout the

monthly cycle, indicating estrogenic excess. Urinary pregnandiol excretion may slow down or stop.

The symptoms may be reproduced by giving estrogen to women no longer secreting the hormone. After the menopause or castration, large doses induce pain and swelling of the breasts, bloating, weight gain, and nervous tension.

To stimulate progesterone secretion, chorionic gonadotropin is given twice weekly for the last two weeks

of the menstrual cycle in doses of 500 to 1,000 units. The last dose is injected not later than three or four days before expected menses.

During the first two or three months of hormone therapy, symptoms are relieved by diuretic and antispasmodic drugs and a low-salt, low-carbohydrate, high-protein diet with frequent meals. Thyroid extract is given in small or moderate amounts. In a few cases vitamin B complex is effective.

Dystocia from Cervical Abnormality

HUGH R. ARTHUR, M.D.*

CONSTITUTIONAL or spasmodic rigidity of the uterine cervix occurs in 3 forms, with or without edema. The cervix may be [1] thick and fibrotic, [2] tense and closely applied to the fetal skull, or [3] hanging loosely about the head.

Cervical abnormalities were observed in 26 of 1,784 deliveries at a maternity hospital in Durham, England, by Hugh R. Arthur, M.D., of the University of Durham. Management was varied according to the cause.

► A thick, hard cervix resembling a cartilaginous ring is often associated with uterine inertia. Although the cervix may dilate fully, the child's life is threatened in the meantime by uterine infection and interference with uteroplacental blood flow. Cesarean section should be done promptly, before sepsis develops.

► Tension may produce a knife-edged external os, but the cervix hugs the fetal skull and eventually dilates if edema does not supervene. When edema combines with fibrosis and muscular spasm, hot douches, gentle manual stretching, and a boroglycerine vaginal pack may be effective. Sedatives and local anesthesia are applied.

► Overhanging cervix may be confused with simple looseness until onset of edema. Vaginal delivery is generally safe but likely to lacerate the cervix, and forceps are employed with care to push the lax tissues back over the head. Cesarean section may be necessary. Cervical incision is done only when the cervix is tense, the head low, dilatation at least three-fourths complete, and edema absent.

* Cervical dystocia. *Obst. & Gynec. Surv.* 5:348-350, 1950.

Urinary Tract Injury in Gynecologic Surgery

HOWARD J. HOLLOWAY, M.D.*

Northwestern University, Chicago

DAMAGE to the urethra, bladder, and ureter in the course of pelvic operations can usually be prevented or immediately recognized by two precautionary measures:

- Injection of 5 to 10 cc. of methylene blue into the bladder after preoperative catheterization before all major gynecologic procedures.
- Insertion of catheters into both ureters before operation when extensive adhesions or difficult dissections are anticipated.

Howard J. Holloway, M.D., reports that urinary tract injury, once frequently encountered as an obstetric complication, is now seen largely as the result of operations.

Bladder injuries apparently occur with equal frequency in total, subtotal, and vaginal hysterectomies and are most likely to happen during the mobilization of the bladder from the body of the uterus and cervix. If the injury is recognized at operation, repair should be immediate.

Two layers of fine catgut are employed, the more superficial of which should be an inverting suture. De-vitalized edges of the defect are excised. The bladder is put at rest with an indwelling catheter, inserted at the close of operation, and irrigated gently with boric acid solution twice daily. A urinary antiseptic should be administered.

* Injury to the urinary tract as a complication of gynecological surgery. Am. J. Obst. & Gynec. 60:30-40, 1950.

The catheter is removed in eight to ten days. Complications rarely result.

Ureteral injury is most likely during complete abdominal hysterectomy with removal of intraligamentous tumors. When a ureter is accidentally clamped or tied, the ligature should be removed immediately. After operation a ureteral catheter may be inserted and left in for seven to ten days.

If a ureter is severed and the accident is recognized, management depends upon the level of the division and the condition of the other kidney, since ligation of a ureter results in ultimate atrophy of the kidney. Until the condition of the other kidney is determined, the proximal end of the ureter may be brought out through a puncture wound in the abdominal wall.

When implantation of the end of the ureter into the bladder without tension is possible, ureterocystostomy is satisfactory. The lower portion of the ureter should then be ligated.

Ureteral anastomosis may be attempted by splinting the ureter with a ureteral catheter. One end extends into the bladder and the other toward the kidney pelvis. The vesical end is later brought out through the urethra. The cut ends of the ureter are united with fine catgut. Peritonization must be com-

plete to prevent urinary leakage into the peritoneal cavity.

Nephrostomy is rarely necessary but is a means of temporarily preserving kidney function when immediate repair is not possible.

If implantation into the bladder is impossible, the proximal end may be exteriorized through a stab wound in the abdominal wall and allowed to drain until further measures are feasible, or the cut ends may be ligated, preferably with nonabsorbable material.

When urinary extravasation into the tissues occurs as a result of injury not recognized at operation,

cystoscopy and ureteral catheterization are of great importance in determining the site of injury. Ureteral injuries may be localized as a guide to repair.

Differentiation between leakage of vesical and ureteral origin is easily made by instillation of methylene blue into the bladder or by retrograde cystography and pyelography. Since some vesicovaginal fistulas heal spontaneously, a prolonged period of observation is advisable before repair. Ureterovaginal fistulas, which frequently heal as the result of nonfunction of the affected kidney, should be dealt with immediately.

Diagnosis of Toxemia in Pregnancy,

LEON C. CHESLEY, Ph.D.*

THE different forms of toxemia require specific treatment and must be differentiated. Leon C. Chesley, Ph.D., emphasizes the value of simultaneous renal clearances of urea and uric acid in distinguishing preeclampsia, hypertensive disease, and renal disease.

Among 290 pregnant women at the Margaret Hague Maternity Hospital, Jersey City, N. J., clearance rates were unaffected by high blood pressure but were decreased by renal insufficiency. Blood uric acid values were considerably reduced during preeclampsia.

Normal urea clearance is about 70 cc. per minute and uric acid clearance 15 cc. per minute. In healthy pregnant subjects, urea clearance is 119% and uric acid 112% of normal rates. The uric acid-urea ratio average is 0.94 and ranges from 0.45 to 1.5.

With hypertension alone, all values are practically normal. Renal disease lowers the respective rates in almost equal proportions, although with severe illness urea clearance may be more impeded.

During preeclampsia, urea clearance is 95% of the normal rate and uric acid 52%. The clearance ratio is about 0.54 and varies from 0.25 to 1.05. If the condition complicates hypertension, uric acid clearance falls disproportionately.

* Simultaneous renal clearance of urea and uric acid in the differential diagnosis of the late toxemias. *Am. J. Obst. & Gynec.* 59:960-969, 1950.

point of departure for special feeding cases...

Dryco is not only the point of departure for almost every type of infant formula—it is also in itself a valuable food for special cases. Dryco assures ample protein intake while its low fat ratio and moderate carbohydrate content minimize digestive disturbances.

The applicability of the Dryco formula is strikingly seen in an observation by Pitt: "The majority of cases of infant diarrhea, seen in private practice today, are of such nature that changing the formula to one of low fat and low carbohydrate content is all that is necessary to correct the condition..." Dryco is specifically recommended for these cases.*

In addition to formula flexibility, Dryco offers other advantages.

Dryco's special drying process makes it more easily digested by certain infants than the fresh milk from which it is made. It supplies more minerals, particularly more calcium, than a corresponding formula of whole milk, plus 2500 U.S.P. units of vitamin A and 400 U.S.P. units of vitamin D per reconstituted quart. Only vitamin C need be added. Each tablespoonful supplies 31½ calories. Readily reconstituted in cold or warm water.

*Pitt, C.K.: *J.M. Asso. Ala.* 19:101 (Oct.) 1949.

8 oz.

Dryco®

5



4

a versatile

3

base

for

"Custom"

formulation

Available at pharmacies in 1 and 2½ lb. cans.

The Prescription Products Division, The Borden Company
350 Madison Avenue, New York 17, New York

Manifestations of Autonomic Dysfunction

RICHARD H. LYONS, M.D.

State University Medical Center, New York City

FRANCIS S. CALIVA, M.D.*

Syracuse University, N.Y.

COORDINATION of body activity to meet changing environmental conditions requires a complex relation between the autonomic nervous system, various elements of the central nervous system, and the chemical and endocrine balance of the body (see illustration).

Stimuli to the autonomic ganglia are generally considered to come directly from the hypothalamus, medulla, and cord.

The hypothalamus is important because stimuli arising from cerebration must pass through this center. The medulla is the site of many automatic controls and is also a way station for the transmission of impulses from higher centers. Like the cord, the medulla serves in the reflex arc from visceral afferents to the effector cells.

Richard H. Lyons, M.D., and Francis S. Caliva, M.D., divide autonomic dysfunctions into three groups, depending upon site of origin.

CENTRAL DYSFUNCTIONS

Syndromes arising centrally are either organic or emotional.

Indicative of local organic hypothalamic disease are disturbed temperature regulation, hypersomnia,

* The clinical manifestations of autonomic dysfunction. *New York State J. Med.* 50:1801-1809, 1950.

autonomic epilepsy, and the hypertensive diencephalic syndrome. Patients with brain injury often have subcutaneous vasodilatation or vasoconstriction, probably the result of interruption of inhibitory impulses from the cortex to the hypothalamus and medulla. Diabetes insipidus and the adiposogenital configuration are mainly endocrine in nature.

Manifestations of disease of emotional origin may be cardiovascular, metabolic, genitourinary, or gastrointestinal and are at first mediated through the vegetative nervous system; later, pathologic alterations can occur.

Cardiovascular disorders include neurocirculatory asthenia, transient arrhythmias, and syncope. The increased arteriolar resistance in early hypertension is probably neurogenic, as is emotional vasoconstriction that occurs in the extremities, nose, or stomach.

A disturbed state of mind also affects bladder activity and may even cause appearance of albumin in urine.

Pylorospasm, too, may occur as a result of neurosis. Ulcerative colitis or peptic ulcer often develops as a sequel to disturbed gastric function

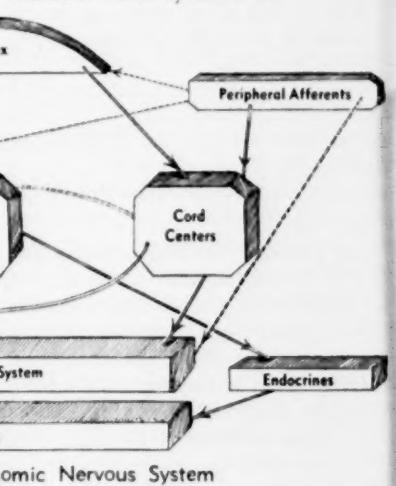
caused by autonomic instability. Nausea, vomiting, and diarrhea may all accompany an anxiety state.

Hypoglycemia is often precipitated by an emotional storm, and hyperglycemia is part of a physiologic re-

lationship to an emergency. Hyperventilation may be observed in psycho-neurotic individuals.

With sympathetic hypotonia are found Horner's syndrome, postural hypotension, anhidrosis, and lipodystrophy.

Illustrative of parasympathetic hypertension is the sinus bradycardia or sinoauricular block of vagotonia. Bronchoconstriction, edema of bronchial mucosa, and hypersecretion of the bronchial glands, all vagus effects, occur in bronchial asthma.



Interrelations of Autonomic Nervous System

sponse to an emergency. Hyperventilation may be observed in psycho-neurotic individuals.

PERIPHERAL EFFERENT DYSFUNCTIONS

Among disorders with sympathetic hypertension are hyperhidrosis, ileus, and possibly the lid lag of thyrotoxicosis. Megacolon may result from autonomic imbalance with adrenergic preponderance. Raynaud's phenomenon and Raynaud's disease both involve excessive vasoconstrictor activity. Hypertension may well be classified in this group. Erythromelalgia and acrocyanosis exhibit sympathetic and parasympathetic effects.

Illnesses associated with reflex peripheral vasoconstriction and relieved by sympathetic blocking agents in-

clude thromboangiitis obliterans, arteriosclerosis obliterans, frostbite, trench foot, thrombophlebitis, peripheral emboli, and the scalenus anticus, the cervical rib, and the shoulder-hand syndromes.

PERIPHERAL AFFERENT DYSFUNCTIONS

Causalgia is a posttraumatic state associated with vasomotor disturbances and hyperhidrosis and represents a sympathetic reflex arc which may be self-perpetuating. Pain may be abolished by blocking the sympathetic pathways.

NEUROLOGY

Sympathetic block may also stop the pain of angina pectoris, herpes zoster, amputation stump neuralgia, and the back pain of ruptured intervertebral disk and spondylolisthesis.

The carotid sinus syndrome is recognized as recurrent attacks of syn-

cope induced by initiation of an overactive carotid sinus reflex.

Stimuli arising in vagus afferents lead to tenth nerve efferent and consequent cardiovascular, respiratory, or gastrointestinal disturbance. Sudden death during bronchoscopy is an example of a vagovagal syndrome.

Abdominal Epilepsy

MATTHEW T. MOORE, M.D.*

PAROXYSMAL abdominal pain and perhaps other gastrointestinal syndromes may occur as a form of epilepsy without convulsive seizures or loss of consciousness.

Attacks are usually misinterpreted and all too often lead to futile operations. Sudden brief recurrent episodes are suggestive, especially if accompanied by electroencephalographic abnormalities. The diagnosis is confirmed by response to anticonvulsants.

Gastrointestinal function is served or affected by many cortical areas and the diencephalon, directly or indirectly. Any irritation or lesion of the influential regions may provoke reactions. Matthew T. Moore, M.D., of the University of Pennsylvania, Philadelphia, noted cerebral injury, brain tumor, tuberous sclerosis, or scarlatinal encephalopathy in half of 18 cases.

Seizures are precipitated by the usual epileptic factors. Pain may occur alone or associated with ill-defined sensations, nausea, vomiting, diarrhea, pallor and sweating, clonic abdominal movements, rumbling sounds, nightmares, or postictal exhaustion.

In addition to standard neurologic tests, roentgenography, and electroencephalography, examination may require analysis of cerebrospinal fluid, cerebral angiography, or pneumoencephalography.

If the lesion is not bulky or degenerative, response to anticonvulsants is almost uniformly gratifying. Symptoms and electrograms are completely controlled or greatly improved by the initial therapeutic test.

Dilantin sodium, mesantoin, phenobarbital, and bromides such as alkaline or calcium bromidogalactogluconate are employed in flexible combinations. Other related disorders, whether constitutional, infectious, or metabolic, receive special care. Diet is regulated and guidance offered in social and emotional problems.

* *Abdominal epilepsy. Am. J. M. Sc. 220:87-90, 1950.*

Coarctation of the Aorta in Infancy

MARTIN M. CALODNEY, M.D., AND MERL J. CARSON, M.D.*

Washington University, St. Louis, and University of Southern California, Los Angeles

SINCE one of the common causes of cardiac failure during the first two months of life is coarctation of the aorta, blood pressures and femoral pulses of all infants should be ascertained as a routine procedure.

Early diagnosis of coarctation may be lifesaving, if measures are immediately taken to support the failing heart and eliminate associated illness.

Hypertension in only the upper extremities, without urinary or neurologic disorder, is pathognomonic. A good femoral pulse with hypertension in the arms denotes the infantile variety of coarctation; weakness or absence of pulsations indicates the adult type or possibly the infantile type with a small or closed ductus.

The infantile type is a narrowing of the aortic arch proximal to the mouth of the ductus arteriosus, usually associated with a patent ductus. The constriction may be sharp or diffuse. The adult type has a constriction at or just distal to the mouth of the ductus, and collateral circulation is extensive.

Reviewing 22 cases of coarctation of the aorta in infants, Martin M. Calodney, M.D., and Merl J. Carson, M.D., found hypertension in the arms, at birth or very soon thereafter, in 14 of the 17 cases in which the blood pressures were recorded. Hypotension or lack of blood pressure

in the legs was noted in every case. The systolic blood pressures were from 100 to 190, and the diastolic from 70 to 130.

At birth, 17 of the infants appeared normal, 2 were persistently cyanotic, 2 had intermittent cyanosis, and 1 had hypoplasia of the mandible with obstruction of the pharynx by the tongue. Signs or symptoms of cardiorespiratory distress appeared during the first two weeks of life in 17 patients.

Of the 22 infants, 18 died during the first eight weeks and all were dead at twenty months.

Contrary to the currently accepted idea that infantile coarctation is usually associated with defects incompatible with life, only 27% of the patients had other grave cardiovascular anomalies.

The femoral pulse may be absent or barely palpable, especially if the ductus is widely patent. Often no blood pressure can be detected in the lower extremities.

A systolic precordial murmur, notably inconstant, may be heard. Cardiorespiratory distress with rapid, grunting, labored respirations and supra- and infraclavicular retractions may be noted at the first examination. Cyanosis and liver enlargement are the rule. Some form of edema is common but may extend only below the elbows and the knees.

* Coarctation of the aorta in early infancy. *J. Pediat.* 37:46-77, 1950.

Fluoroscopy usually reveals both right and left enlargement of the heart. Often the lungs are compressed in both bases. Electrocardiograms show right axis deviation more often than left. Myocardial damage is often present.

Plethysmograms usually show the amplitude of the pulse wave contour in the feet to be considerably less than in the hands. The dicrotic notch is usually lost in the feet. A pronounced delay in pulse wave velocity is regularly found, varying from 2.21 to 5.75 meters per second. With patent ductus arteriosus, the dicrotic notch is small and variable or lacking, the wave apex is broadened, and the anacrotic and dicrotic limbs tend to slope equally. Comparison of the pulse in both hands and both ears will indicate whether the subclavian or carotid arteries are involved.

Severe hypertrophy and dilatation of both ventricles occur early. With a widely patent ductus, the right ventricle is the more prominently dilated. As the ductus arteriosus closes, the dilatation and hypertrophy become greater in the left ventricle and the blood pressure in the arms increases.

The most frequent direct or indirect cause of death is congestive heart failure. Acute associated illness is often a precipitating factor.

The cases may be divided into 4 groups:

Group 1—Patients with slight constriction in which the cross sectional area of the coarctation is greater than 60% of that of the aortic ring. Blood pressure is normal and signs and symptoms are usually lacking.

Group 2—Cases of infantile coarctation with constriction of a moderately severe degree sufficient to cause hypertension. Although normal at birth, these babies usually have congestive heart failure within days to weeks, and die. Infantile coarctation has been found in adults, indicating that some survive. However, when the heart begins to fail, the prognosis is extremely poor.

Group 3—Babies with infantile coarctation with severely constricted or entirely occluded aortas. Frequently born cyanotic or dyspneic, these infants may survive several days. The pulmonary artery is continuous with the descending aorta through the widely patent ductus arteriosus.

Group 4—Patients with an adult type of coarctation with severe or complete constriction. The babies are normal at birth, but cardiac failure may develop within a week to several months. As in adults, once cardiac decompensation occurs, the prognosis is exceedingly grave.

Patients in Group 1 and asymptomatic patients in Group 4 require no treatment other than prevention of infections. Oral penicillin during the first year of life is worth while as prophylaxis.

Patients falling in Group 2 and those in Group 4 with cardiac failure must have active treatment to support the failing heart and to eliminate associated illness. Digitoxin, 0.1 mg. for each 3 kg. of body weight, is given in divided doses for twelve to twenty-four hours, more rapidly if necessary. The effect is maintained by a daily dose of 10% of the digitalizing dose. Oxygen should be used early and intensively. Mercurhy-

drin, 0.25 cc., is given intramuscularly every twenty-four or forty-eight hours as needed.

For edema, the reduction of circulating blood volume is helpful. Bloodless phlebotomy is preferred. A blood pressure cuff is placed on each extremity, and 3 are inflated simultaneously to a pressure just above the diastolic level. A cuff is released and another inflated every fifteen minutes. In the legs, the pressure within the cuff is set at 50 to 60 mm. of mercury. Intravenous fluids, blood, and plasma are very dangerous and may fatally embarrass an already failing heart. Intragastric feeding obviates aspiration. A salt-free milk, Lonolac, is used as long as edema and cardiac failure

continue. The carbon-dioxide combining power and serum chlorides are closely watched for abnormalities. Antibiotics should be employed early to combat any infection.

The surgical procedure most promising for infants is resection of the coarctation with the gap bridged by an arterial graft from another individual. For success, the collateral circulation must be sufficient to carry a supply of blood to the lower part of the body during the few minutes in which the aorta is completely occluded.

When decompensation has occurred, medical measures should be vigorously employed to restore the patient to an operable state. This usually requires two to three weeks.

Contrast Medium for the Digestive Tract

KURT SCHNEIDER, M.D., AND EGON KRUSE, M.D.*

RADIOLOGIC examination of the gastrointestinal tract is facilitated if barium sulfate dissolved in water-soluble pectins is employed as the contrast medium.

Addition of macromolecular pectins as carriers and stabilizers of the opaque salt increases the viscosity of the fluid, state Kurt Schneider, M.D., and Egon Kruse, M.D., of the University of Karlsruhe, Germany. The solution spreads slowly over the mucosa and covers the folds with a fine uniform film, permitting differentiation of all the details in relief and showing contours exactly.

Constipation is experienced only by those patients who were constipated before use of the contrast medium. The hydrophil pectins produce normal bowel movements and prevent formation of fecal stones. Patients given barium pectin have stools of normal consistency within twenty-four hours after ingestion. The pectins also possess a bactericidal action. The solution does not sediment; therefore, when a barium enema is given, blockage is avoided.

* Ueber ein neues Kontrastmittel für Magen-Darm-Untersuchungen. *Aerztliche Forschung* 1:280-284, 1950.

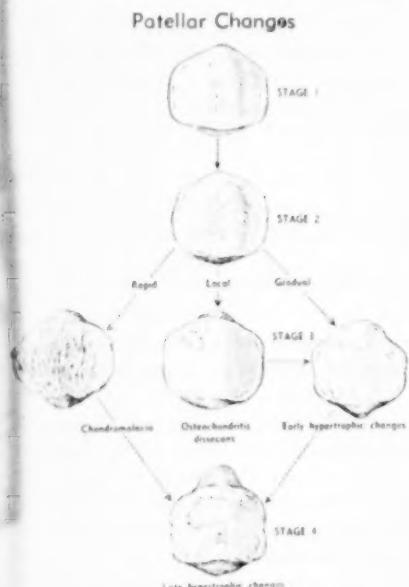
The Patella

EDWIN F. CAVE, M.D., AND CARTER R. ROWE, M.D.*

Massachusetts General Hospital, Boston

THE kneecap protects the femoral condyles and improves the efficiency of leg movement. It should not be excised indiscriminately in treating a derangement of the knee.

After fifteen years of age, almost



every knee joint shows some evidence of degeneration, the superficial articular cartilage layer of the patella being the site of earliest change. Repeated stress, strain, wear, pressure, and disturbed or abnormal joint

* The patella; its importance in derangements of the knee. *J. Bone & Joint Surg.* 32A:542-553, 1950.

mechanics over the years alter the patella. The stages of change, shown in the illustration, are:

Stage 1—Local softening of the cartilage, gradual unmasking of the vertical fibrils, and loss of hyaline matrix. Early fissuring or splitting of the cartilage.

Stage 2—Gradually increased disintegration.

Stage 3—Three possibilities: [1] rapid disintegration of part or all of the articular bed in the thick articular cartilage of the young adult, chondromalacia, [2] local fracture of the cartilage with the separation of a large single fragment, osteochondritis, [3] gradual thinning of the entire cartilage and erosion to the bone.

Stage 4—The final stage, in which a large part of the articular cartilage has been lost and the patella is broad, thick, and uneven.

CHONDROMALACIA

Although all stages in the aging process of the patella may be considered variations of chondromalacia, the term is applied to rapid fragmentation of the thick hyaline cartilage layer in the young adult.

The changes may appear as localized, shaggy areas of softening and fragmentation of the cartilage or as destruction of the entire articular surface, with secondary subchondral bone proliferation. The condition is not rare in young adults, but is frequently unrecognized.

In reporting 12 cases, Edwin F. Cave, M.D., and Carter R. Rowe,

M.D., note that symptoms were usually precipitated by recurrent strain on the knee or by repeated direct blows on the patella.

Symptoms comprise intermittent pain over the anterior aspect of the knee and a momentary sensation of catching, followed by slight stiffness and moderate swelling of the joint, atrophy of the thigh, and tenderness along the medial border and the articular surface of the patella. The kneecap usually appears normal on roentgenograms.

If the symptoms and disability are slight, the patient should be watched carefully, given exercises to maintain strength of the quadriceps, and cautioned to avoid knee injury. Operation may be required when the knee joint locks or frequently catches, swells, and becomes stiff.

Exploration is done through a parapatellar incision. An area of disintegrated cartilage of moderate size is completely excised down to bone. A diligent search is made for loose cartilaginous bodies. If the process covers the articular surface or if the patella is eburnated and thickened, patellaplasty or complete patellectomy is indicated.

HYPERTROPHIC PATELLA

In elderly persons, hypertrophic changes of the patella may appear after chondromalacia or injury from wear.

The patient has intermittent or continuous swelling and pain in the knee that is aggravated by accidental injury or unusual exercise. The synovial lining and patella are thick; hypertrophy appears along the joint lines. These changes, with or without

loose body formation, will be visible on roentgenograms. Motion is usually restricted and painful.

Frequently, improvement results from conservative management, such as external support, heat, and muscle exercises, but sometimes surgery is necessary. The less raw surface left over the condyles, the better the postoperative course; hence hypertrophic spurs are not removed from the femoral or tibial condyles.

From midway between the femoral epicondyle and the medial border of the patella, a long parapatellar incision is extended upward, separating the vastus medialis from the quadriceps tendon, and downward to the tibial tubercle. Loose bodies are carefully sought. Unless extremely well preserved, both menisci are excised.

The patella is turned so that the articular surface faces upward. By sharp dissection, the synovial membrane and a portion of the tendon and quadriceps expansion are separated from the superior, lateral, and inferior borders of the patella; sufficient tendinous attachment is left to maintain continuity of the extensor apparatus. With a handsaw or an oscillating bone saw, the patella is cut horizontally and thinned to about one-quarter normal size.

The infrapatellar fat pad is incised for a depth of 2 to 3 mm. and is undercut to, but not including, the attachment to the inferior border of the patella. This flap is turned upward, covering the bony surface of the patella, with the synovial membrane against the cut surface of the bone. The edges are sutured to the surrounding synovial membrane.

ORTHOPEDICS

and tendinous cuff, and the wound is closed in layers.

The patient is encouraged to set the quadriceps on the second post-operative day; ordinarily, control is fairly well restored by the third or fourth day. A plaster cylinder support, if used, is usually removed by

the eighth day. Resistance exercises for the hamstrings and quadriceps are begun on the seventh or eighth day, and walking is started on the seventh to tenth. A walker is used, then crutches are continued for six to eight weeks. Resistance exercises are done for six months or more.

Nylon Arthroplasty of the Knee

JOHN G. KUHNS, M.D., AND THEODORE A. POTTER, M.D.*

A USEFUL range of painless motion can be restored to knee joints stiffened by chronic arthritis, if fused surfaces are cut apart and new adhesions prevented by an interposed nylon film.

John G. Kuhns, M.D., of Harvard University and Theodore A. Potter, M.D., of Boston operate on joints ankylosed or destroyed by rheumatoid or degenerative arthritis. The process should be inactive for at least a year before surgery, epiphyses closed, the general health good, and age preferably under sixty years.

A medial parapatellar incision is carried through fascia, capsule, and synovial membrane. Adherent structures are dissected, and osteotomy is performed through the joint line.

The lower end of the femur is fashioned into a rounded wedge, and a shallow groove is formed in the tibial plateau. About an inch of the joint is resected and roughened areas are filed down. The intercondylar notch is deepened for the patella, which is thinned and smoothed.

Nylon manufactured in strips 12 in. wide and 0.005 in. thick is sterilized in mercuric chloride solution. The material is sewed over the lower end of the femur, pleated to fit, and carried over the supracondylar area. A pressure dressing and sheet cotton are applied from ankle to groin.

Leg muscles require prolonged training with special apparatus. Weight bearing is started in a bivalved plaster cylinder in three weeks to two months, and a caliper or plaster cylinder is worn for at least four months.

In a series of 25 cases, good function was restored in nine to twelve months, and no further support was required. All joints were stable, many with 90° of motion.

* Nylon arthroplasty of the knee joint in chronic arthritis. *Surg., Gynec. & Obst.* 91:551-562, 1950.

Improved Tidal Irrigator

OLE A. NELSON, M.D., AND ALEXANDER W. KRETZ, M.D.*

Swedish and Providence hospitals, Seattle

TIDEAL irrigation of the bladder may be satisfactorily accomplished by a new apparatus which is easily operated and sterilized (see illustration).

The designers, Ole A. Nelson, M.D., and Alexander W. Kretz, M.D., incorporated the submerging principle and other features not previously combined in the same mechanism.

The apparatus is so constructed that intravesical pressure can be changed at will. Placement of the siphon inside a glass cylinder provides positive action, that is, siphonage invariably begins as soon as the fluid level in the bladder reaches a certain height, and continues until the bladder is completely empty. Fluid remaining in the machine after siphonage stops cannot be washed back into the bladder.

Only two adjustments are necessary before use: placement of the high-tide point at the proper height in relation to the bladder, and regulation of the drip rate of the irrigating fluid.

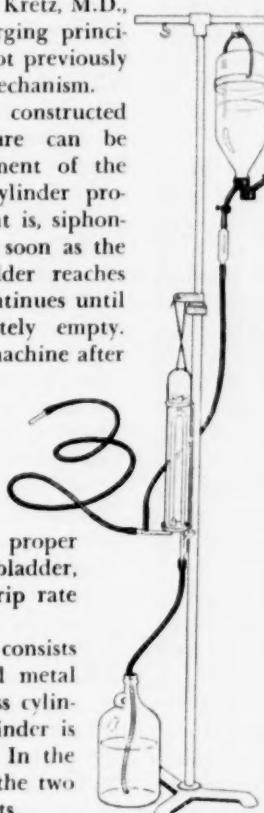
The siphon apparatus consists of an inverted U-shaped metal tube placed inside a glass cylinder. Each end of the cylinder is covered by a metal cap. In the top cap are three holes, the two smaller serving as air vents.

The largest opening admits a screw-threaded truss rod which is attached to the bottom cap. When a nut on top of the rod is tightened, each metal cap is drawn against the adjacent end of the glass cylinder and the apparatus is thus held together.

Between the bottom end of the glass cylinder and the metal cap is a rubber gasket. Through the bottom cap are inserted the tube from the bladder and the outlet arm of the inverted U tube or siphon.

The lower end of the siphon has three features essential for satisfactory operation of the irrigator: a constriction ring projecting into the lumen, an air vent, and a tip enlarged to fit a sizable rubber tube which conveys fluid to the waste container.

In addition to use for cord bladder and irrigation for infection, the apparatus is useful in promoting reestablishment of normal voiding after prostatectomy and pelvic or rectal surgery.



* Improved tidal irrigator. Northwest Med. 49:574-575, 1950.

Medical Forum

Discussion of articles published in MODERN MEDICINE is always welcome. Address all communications to The Editors of MODERN MEDICINE, 84 South 10th St., Minneapolis 3, Minn.

Varicose Veins in Pregnancy*

TO THE EDITORS: The treatment of varicose veins in pregnancy depends completely on the amount of subjective symptoms they cause and whether they were present to an appreciable degree before the pregnancy.

It is a common fact that many women with no or very few varicosities will develop considerable varicosities during the course of a pregnancy. It is, too, a common fact that in the great majority of these cases the veins undergo spontaneous disappearance in the months following the delivery. It is therefore apparent that if the veins were not present before pregnancy and the symptoms are moderate, as they are in most cases, the treatment of choice should be conservative and is best carried out by comfortable elastic stockings.

If, however, the patient had varicose veins to an appreciable degree before the pregnancy and if they have become more severe and give rise to symptoms, I agree with Dr. James M. Sullivan that there should be no hesitation in doing a ligation at any time during the pregnancy. This would particularly include wom-

en with varicose ulceration, symptomatic eczema, or increasing skin pigmentation.

Probably the most opportune time is toward the end of the second trimester. It is not likely then that the ensuing three months will give sufficient time for the varices to reestablish themselves, which can happen if the ligation is done too early. In spite of a well-done ligation, the back pressure caused by a large gravid uterus can cause the varices to recur.

The usual tests and the determination of incompetent valves in the saphenous system and communicating veins, particularly at blowout levels, are unnecessary and yield no worthwhile information (Robert V. Schatken, *New York State J. Med.* 49:1947-1950, 1949). The additional sections and ligations that are made at blowout levels are unsound and unphysiologic.

The procedure, if done during pregnancy, should consist of a simple high section, ligation of all the tributaries, and retrograde injection of a small amount of sodium morrhuate. It is important to explain to the patient that this procedure will obliterate the varicosities but will never remove the cause, which is unknown, and that, therefore, return

* MODERN MEDICINE, Sept. 15, 1950, p. 99.

visits for the injection of sclerosing solutions will be necessary if varicosities reappear. Recurrence takes place in a disagreeably high proportion of cases regardless of the thoroughness of the surgical procedure.

ROBERT V. SCHATKEN, M.D.
Walton, N.Y.

Spread of Tuberculosis by Thoracoplasty*

TO THE EDITORS: The possibility of spreading tuberculous disease by means of accidental trauma has been noted for many years, both bronchogenic and hematogenous types of spread being implicated in the process. In evaluating a therapeutic procedure like thoracoplasty, the importance of ancillary measures such as those stressed by Drs. Stephen C. H. Yang and William M. Lees must be given due consideration, or thoracoplasty *per se* as a therapeutic procedure may be unduly condemned.

Intratracheal intubation and application of positive pressure in anesthesia are necessary manipulations that are added to the traumatic effects inherent in surgical procedures. Inefficient preoperative drainage, improperly performed anesthesia, paradoxical motion of the chest wall, and undue sedation of the cough reflex are individually and collectively dangerous to the patient.

In considering the plan for therapy when a patient is first admitted with a diagnosis of tuberculosis, it is well to envision the possibility

of future surgery. If surgery is contemplated, the use of streptomycin and like compounds may be deferred until they may be used as auxiliary measures for surgery.

CHARLES M. NICE, JR., M.D.
Minneapolis

► TO THE EDITORS: When pulmonary tuberculosis is treated by thoracoplasty, extension of tuberculous lung involvement has occurred sufficiently often during the immediate postoperative period to indicate that thoracoplasty may be responsible for dissemination of tuberculosis. If patients are carefully selected for thoracoplasty, postoperative spreads are rarely encountered. It is important, however, to recognize the factors that may be responsible for such spreads and to use such measures as are available to eliminate or correct them.

Patients with acute or progressive types of tuberculosis are poor candidates for surgery, especially for surgery performed under general anesthesia. Thoracoplasty in such cases should be deferred until the lesion has become relatively stabilized. Stabilization may be promoted by maintaining the patient at strict bed rest for a few weeks or months and by the judicious use of other therapeutic aids such as pneumoperitoneum and antibiotics.

Patients with active tuberculous tracheobronchitis and bronchiectasis are poor candidates for any type of collapse therapy, as are patients with so-called tension cavities. Tuberculous disease of the air passages generally responds quite well to strep-

*MODERN MEDICINE, Aug. 15, 1950, p. 65.

MEDICAL FORUM

tomycin therapy. When antibiotics are used in patients for whom thoracoplasty is contemplated, it is preferable to perform the surgery as soon as satisfactory response to the antibiotics is manifest and before streptomycin-resistant organisms emerge. Resection rather than thoracoplasty should be considered for patients with fibrostenosis of the bronchus and those with bronchiectasis.

Dissemination of tuberculosis by thoracoplasty occurs when secretions containing tubercle bacilli are retained and reach previously uninfected portions of the lung via the bronchi. The incidence of postthoracoplasty spreads has been greatly reduced by careful staging of the operation. When a wide area of the chest wall has lost its bony support by extensive decortication, paradoxical motion of the chest wall and mediastinal flutter result. Intrabronchial secretions are then likely to be aspirated into the contralateral lung. It also becomes more difficult to expel secretions by cough. Other factors which may interfere with the efficiency of the cough reflex postoperatively are previous interruption of a phrenic nerve, delayed awakening following surgery, excessive sedation, and chest pain.

Before surgery, the following measures may be of value in reducing the sputum volume and the retention of infected secretions: Postural drainage should be practiced over a period of at least several days and should be thoroughly utilized immediately before the patient is taken to the operating room.

Patients who have a large sputum volume should be given penicillin as

well as streptomycin for a week or more prior to surgery, since secondary infection with organisms which are resistant to streptomycin and are penicillin sensitive may be responsible for some of the suppuration. Preoperative bronchoscopic aspiration may be advisable when secretions have not been adequately expelled.

The use of general anesthesia in competent hands does not appear to increase the incidence of postthoracoplasty spread. An endotracheal tube should be used in all patients who have a significant sputum volume, permitting frequent aspiration of secretions while the patient sleeps.

Deep anesthesia is avoided and the level is controlled in such a manner that the patient awakens promptly following completion of the operation. Blood replacement to prevent shock also obviates lack of response and inadequate sputum expulsion during the postoperative period.

The chest wall should be supported with a very firmly applied adhesive dressing to limit paradoxical chest wall motion. Experienced special duty nurses are of inestimable value in the postoperative care. Patients should be turned frequently from side to side while awake and encouraged to cough and raise, the wound being supported manually while the patient coughs.

During sleep the patient is kept on his operated side or back in an attempt to avoid aspiration or drainage of infected secretions into the contralateral lung. Carbon dioxide inhalations, administered periodical- ly, are recommended for hyperven-

tilating the lungs and for thinning and promoting expulsion of secretions. Many patients cough and expectorate more efficiently when in the sitting position.

Sedation should be used with caution, an attempt being made to control excessive pain without inhibiting the cough reflex. When pain is extreme, intercostal nerve blocks with procaine solution are of value. If cough is ineffectual, secretions should be aspirated through a catheter introduced into the trachea and major bronchi; occasionally one or more bronchoscopies for aspiration are indicated.

Postoperative atelectasis in patients undergoing thoracoplasty for pulmonary tuberculosis is likely to result in new tuberculous lung lesions. The above measures will generally prevent the development of atelectasis, but if atelectasis does occur, bronchoscopy should be promptly performed.

Should dissemination of tuberculosis occur following thoracoplasty, despite all effort to prevent such a development, antibiotic therapy with streptomycin and PAS should be instituted at once.

WILLIAM S. CONKLIN, M.D.

Portland, Ore.

► TO THE EDITORS: Spread of pulmonary tuberculosis during thoracoplasty can be almost entirely eliminated as a complication when one follows meticulously the measures outlined by Drs. Yang and Lees. In our opinion, no one of the measures can be safely omitted.

One additional matter might be suggested. It is our practice to be-

gin streptomycin and Parasal one week before the first stage of thoracoplasty and continue the drugs, if tolerated, throughout the interval between stages and for two weeks following the final stage.

With the exception of 2 patients upon whom we inadvisedly performed primary thoracoplasty without adequate preoperative bed rest (three months), we have had no patients whose tuberculosis spread in the homolateral or contralateral lung during thoracoplasty in the past four years.

DUANE CARR, M.D.

Memphis

► TO THE EDITORS: The factors that may play a part in the spread of tuberculosis after thoracoplasty may be classified as follows:

Indications for thoracoplasty—Before the introduction of antibiotic treatment the frequency of spreads was proportionately increased as one deviated from the rigid indication and accepted for operation unstable or recently stabilized lesions. The antibiotics, particularly streptomycin, have permitted more leeway in selection of cases for thoracoplasty, but reactivation and spreads should be anticipated even with the use of these drugs if one operates in the presence of an unstable lesion in the lung to be collapsed or an active lesion in the contralateral lung.

Operative procedure—I believe that everybody agrees that the number of ribs and length of each rib to be resected should be determined after a careful study of the patient's clinical condition and the serial roent-

MEDICAL FORUM

genograms, instead of adhering to a general practice of surgery in every instance. For example, a patient who has a fixed mediastinum may withstand a wide excision of ribs without developing paradoxical breathing, which in itself is a factor in spreads that follow thoracoplasty. Large cavities tend to retain secretions from time to time and, if collapsed too rapidly, may contribute to postoperative spreads.

The other factors which are so clearly brought out by Drs. Stephen C. H. Yang and William M. Lees should be given careful consideration in the planning of surgery.

Pre- and postoperative care—We have found that complications are less likely to occur if the patient is properly prepared before operation by careful attention to nutrition, fluid requirements, and quantity of bronchial secretions. During the operation, sufficient fluid and blood should be given to avoid shock. I thoroughly agree with Drs. Yang and Lees that the anesthetist certainly plays an active part in preventing spreads.

Postoperatively, adequate care by nurses especially trained in the care of thoracic surgery patients is important. The patient must be encouraged to cough, and he must be aided in the effort by manual bracing of the chest by the nurses. The resident physician should be trained in bronchoscopy so as to utilize the procedure whenever segmental or massive atelectasis takes place.

Finally, I feel that postoperative spreads can be reduced by not utilizing collapse procedures when exci-

sion therapy is indicated. This precaution particularly applies to some lesions in which tracheobronchial involvement is encountered. In our own experience in the past four years, postthoracoplasty spreads have not exceeded 2% and have been transient.

BENJAMIN P. POTTER, M.D.
Jersey City, N.J.

► **TO THE EDITORS:** Ipsilateral and contralateral spread of pulmonary tuberculosis may occur following thoracoplasty. Spread of the disease is more likely to appear in the late stages of the operative procedure.

I have not observed that dissemination of pulmonary tuberculosis is more apt to complicate thoracoplasty than other generally used forms of medical and surgical collapse. Regardless of what type of collapse therapy is contemplated, it should not be instituted until all factors predisposing to dissemination of the disease have been controlled and the hazards eliminated.

In properly selected thoracoplasty patients, the incidence of postoperative dissemination should be minimal. Actually, contralateral spread is more apt to occur with pneumothorax.

The preoperative, operative, and postoperative precautionary measures that are enumerated by Drs. Stephen C. H. Yang and William M. Lees are all very helpful in preventing the possible dissemination of pulmonary tuberculosis that results from thoracoplasty.

LOUIS L. FRIEDMAN, M.D.
Birmingham

Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-180

THE CLUE

ATTENDING M.D.: The thirty-year-old man in the next room is a businessman who noted a sudden painful swelling of his right wrist while driving through town an hour ago. He was unable to drive because of the throbbing pain and limitation of motion and so came to the emergency room. He says he has had recurrent arthritis for six years. He has heard that this is a medical center and has decided to stay until we find the cause.

VISITING M.D.: Briefly sketch the pertinent history.



ATTENDING M.D.: The man tells us that he has been to many doctors, tried numerous medications, but nothing has stopped the attacks. The episodes are all alike: One joint is swollen for one to sixteen hours, then becomes normal.

VISITING M.D.: Which joints are affected?

ATTENDING M.D.: Only one at a time—usually the terminal phalanges, wrist, elbow, or shoulder; once the ankle was involved. He has about 25 attacks a year.

VISITING M.D.: Are there any constitutional symptoms?

ATTENDING M.D.: No.

PART II

VISITING M.D.: Let's see the patient. (Walking in, beginning examination of patient after an introduction)

The wrist is slightly swollen, very slightly red. The edema is nonpitting; wrinkles are ironed out. There is limitation of motion, moderate tenderness. (Completing physical examination) Ev-

DIAGNOSTIX

erything else is normal, except for a small, swollen, red edematous area about 2 cm. in diameter below the left elbow. Mm. . . . (Stroking chin) I recognize this disease; it remains now for other clinical and laboratory findings to confirm my diagnosis. Please review them.

PART III

ATTENDING M.D.: No similar disease in the family, no fever . . .

VISITING M.D.: Don't tell me what he doesn't have.

ATTENDING M.D.: Well . . . The white blood cell count is normal and so are uric acid, urine, blood urea, and sedimentation rate.

VISITING M.D.: And so is the roentgenogram of the wrist.

ATTENDING M.D.: Correct. Frankly, I don't know what to do for him.

VISITING M.D.: There is nothing you can do to stop his disease. It is a self-limited, recurrent rheumatic disorder called . . .

PART IV

VISITING M.D.: Palindromic rheumatism—which merely describes its recurrent nature. The condition occurs equally in the two sexes and often stops spontaneously, but frequently continues for years with hundreds or even thousands of attacks. No cure is known. You can assure the patient that he will not be crippled. The disease resembles allergic anaphylactic disorder with the sudden onset and evanescence, but there is no urticaria, eosinophilia, or response to adrenalin. Roentgenograms are always normal.

ATTENDING M.D.: How do you know this isn't rheumatoid arthritis?

VISITING M.D.: By the entirely different clinical pattern. It is monoarticular, has no residual or constitutional symptoms, no fever. No changes are seen in x-ray films; the sedimentation rate is normal.



Special Report

American College of Surgeons Clinical Congress

So many surgeons and hospital representatives came to Boston for the five-day meeting of the thirty-sixth Clinical Congress of the American College of Surgeons that some of them had to stay in hotels as far away as Providence and Springfield. Clinics, forums, symposia, panel discussions, films, conferences, and scientific exhibits presented an abundance of stimulating material.

Color television, as a medical teaching technic, was demonstrated for the second time to a Clinical Congress. The newest addition to the Congress was a series of five post-graduate courses given each morning at five Boston hospitals, covering vascular diseases, fractures of the skull and spine, fractures of the long bones, pre- and postoperative care, and nutrition.

General surgery panel discussions were held for four afternoons, with the fifth devoted to surgical specialties. Ophthalmology and otorhinolaryngology panel discussions took place separately before and after each general surgery session.

The twenty-ninth Hospital Standardization Conference, a section of the Congress, met to discuss trends in hospital administration, special hospital problems, teamwork in the operating room, world health, preparedness for national emergencies,

and most important at the moment, the future of the voluntary hospital.

Dr. Frederick A. Coller of Ann Arbor, president for the past year, started the Congress officially by presenting his greetings at a general assembly, the first morning session.

The meetings were officially closed by the new president, Dr. Henry W. Cave of New York City, at the convocation held the last evening at Symphony Hall, at which Dr. Paul R. Hawley, Director of the ACS, gave the Fellowship Address, "Quo Vadimus?" After this many of those attending the meeting left en masse for a short trip to Bermuda.

Prevention of Adhesions

Postoperative adhesions are being investigated in animals by Drs. John W. Thomas and J. E. Rhoads of the University of Pennsylvania. After producing adhesions in rats and guinea pigs by a standard mechanical method, efforts were made to alter their incidence by local use of heparin and hyaluronidase, intraperitoneal streptokinase and streptodornase, and parenteral cortisone. Penicillin alone and in combination with streptokinase and -dornase has proved in this incomplete, preliminary report to be somewhat effective in minimizing the size of the adhesion but not in decreasing the incidence.

SPECIAL REPORT

Numerous factors in technic were evaluated with respect to adhesion formation. Simple division of adhesions at repeated laparotomies revealed 71% decrease in incidence after the first lysis and 87.5% decrease after the second. Lucite windows in the abdomens of the animals allowed observation of adhesion formation from the time of injury to complete formation.

Enzymatic Debridement

Two papers on the local use of streptokinase and streptodornase were read before the session on wound healing. Both papers came from New York University College of Medicine and the Third Medical Division of Bellevue Hospital.

Dr. George N. Hazlehurst's report was restricted to results from the use of the two enzymes in treatment of fluctuant tuberculous lymph nodes as a means of thinning the exudate and separating necrotic material from the lining of the abscesses. In cases of secondary infection, the enzymes used together with a suitable antibiotic produced consistently good results.

Dr. Sol Sherry's report was concerned with the principles of enzymatic debridement in cases with chronic draining sinuses of diverse bacterial etiology and arising from pleural space, bone, soft tissues, and viscera. The enzymes, properly applied, clean out the exudate as demonstrated by diodrast visualization. In several instances the source and extent of the sinus tract and the nature of the underlying problem could be determined for the first time by the diodrast.

The enzymes also liberate bacteria from the sinus tract, permit eradication by drainage, immune forces, and antibiotics, and stimulate normal processes of repair. Drs. Hazlehurst and Sherry agree that streptokinase and streptodornase are of high value as tools in the therapy of chronic draining sinuses.

Drs. E. Reiser, L. C. Roettig, and G. M. Curtis of Ohio State University have endeavored to determine the feasibility of the use of crystalline trypsin in enzymatic debridement of fibrino-purulent empyema. Of 6 patients with variant types of tuberculous empyema subjected to intrapleural 500-mg. injections of buffered sterile crystalline trypsin solution, 4 have been sterilized without antibiotic intrapleural instillations for tuberculosis. Reexpansion in 2 cases has continued to the present, five months. In the other 2 sterilized cases reduction in space size has been shown. Of the remaining 2 patients, one has been a hopeless case for thirteen years and the other has been negative for three years.

From this data, crystalline trypsin may be of value in the sterilization and reexpansion of tuberculous and nontuberculous fibrino-purulent empyema of a year's standing or less.

Section of Colonic Nerves

Denervation of the distal colon by section of the pelvic colonic nerves to alleviate ulcerative colitis had not been investigated in clinical surgery until the procedure was accomplished recently by Drs. Benjamin G. P. Shafiroff and J. W. Hinton of New York University.

Careful study of the surgical anat-

SPECIAL REPORT

omy of the left colon in 30 cadavers was the basis for an operative plan for denervation. After a series of experiments on dogs, the operation was performed on 5 patients requiring ulcerative colitis treatment.

The innervation of the distal colon is derived principally from the autonomic nervous system. The pelvic plexus is a paired triangular nerve structure located retroperitoneally on the superior fascial layer of the levator ani diaphragm, in close proximity to the ampullary rectum, 1 cm. medial and inferior to the ureters as they lie in close relationship to the vas deferens. The pelvic nerves are derived from the second to the fourth sacral nerves and enter the pelvic plexus posteriorly. The pelvic plexus is anatomically separable into three divisions, an upper rectal division, a forward vesical division, and a lower genital division.

The rectosigmoid and pelvic rectum may be mobilized, the superior hemorrhoidal artery traced distalward, and the colonic nerves projecting from the upper rectal division of the pelvic plexus identified. Both sympathetic and parasympathetic components are sectioned, but the denervation is probably predominantly parasympathetic.

The pelvic nerves must not be cut for fear of parasympathetic denervation of all the pelvic viscera, particularly the bladder.

Improvement symptomatically and physically was noted in these operative cases. Untoward permanent dysfunction or retention of bladder urine has not complicated the operation. The procedure appears to be a more direct approach to the nerv-

ous control of the distal colon than that obtainable by vagal parasympathectomy at the thoracic or upper abdominal level.

Aggravation by Enzymes

Drs. Donald J. Currie and D. R. Webster of McGill University, Montreal, discussed the effect of bile and pancreatic juice on the colon as a possible etiologic factor in ulcerative colitis. By shunting bile and pancreatic juice into the ascending colon of dogs, they were able to produce ulcerative colitis. Although other factors such as infection are undoubtedly partly responsible, the proteolytic enzymes of the digestive juices may be an initiating or aggravating factor.

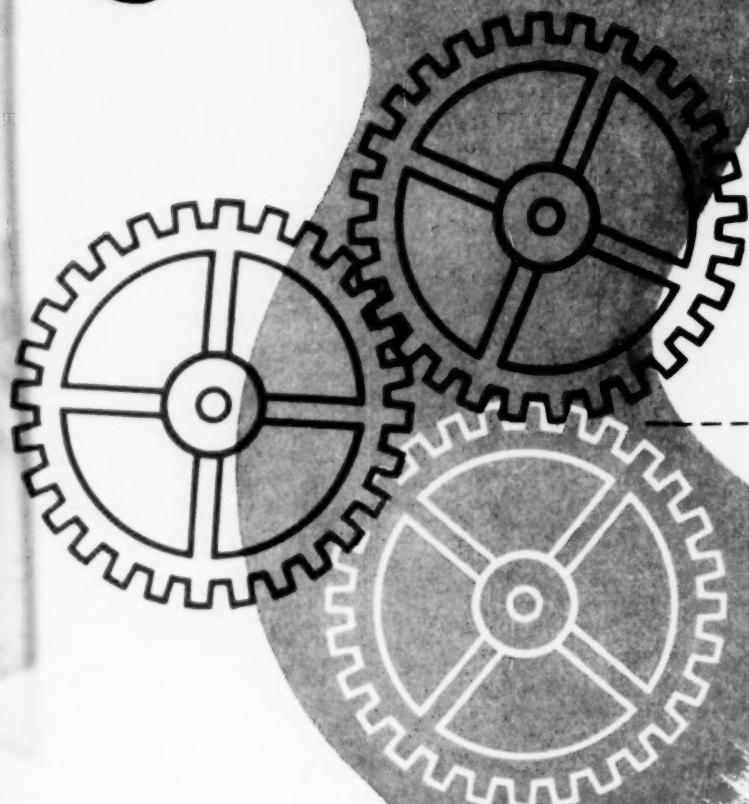
Bronchography

A bronchographic agent with several advantages over lipiodol was reported by Drs. Mordant E. Peck, A. J. Neerken, and Emanuel Salzman of the University of Colorado. A 50% solution of diodrast in 2% methyl cellulose gives satisfactory

(Continued on page 118)



3-Way Coordination in



Hypertension Control...

RUTOL

(A BRAND OF RUTIN,
PHENOBARBITAL AND
MANNITOL HEXANITRATE,
P.M. CO.)

Coordinating effectively with your over-all plan of hypotensive treatment,
Rutol provides safe drug medication designed to satisfy these vital objectives:



- 1 • SEDATION**
- 2 • VASODILATION**
- 3 • CAPILLARY SUPPORT**

Combined sedation and vasodilation are provided by the central effect of Phenobarbital and the direct, smooth muscle relaxing action of mannitol hexanitrate. Protection against capillary fragility¹ is provided by rutin—most active member of the flavone glucosides.

Each Tablet of Rutol contains:

Mannitol Hexanitrate 16 mg. (1/4 gr.)

Rutin 10 mg. (1/5 gr. approx.)

Phenobarbital 8 mg. (1/8 gr.)

Supplied in bottles of 100, 500 and 1000 tablets.

¹. Donegan, J. M., and Thomas, W. A.: Capillary Fragility and Cutaneous Lymphatic Flow in Relation to Systemic and Retinal Vascular Manifestations: Rutin Therapy, Amer. J. Ophthalmology 31:671-78 June 1948.

PITMAN-MOORE COMPANY

PHARMACEUTICAL AND BIOLOGICAL CHEMISTS

Division of Allied Laboratories, Inc., Indianapolis 6, Indiana

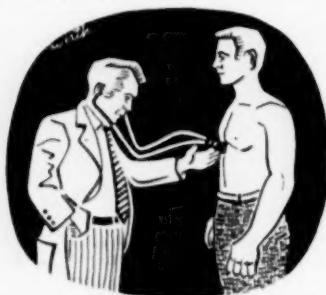
Basic Science Briefs

HEMODYNAMICS

Effect of Work on Plasma Volume in Heart Failure

Exercise in supine position by individuals with congestive heart failure not only raises venous pressure but reduces plasma volume in rough proportion. The decrease may be at least partly responsible for renal retention of water and salt. Drs. Robert P. Gilbert and J. K. Lewis of Stanford University, San Francisco, assume that a similar change probably occurs with acute failure, but from sudden loss of pumping ability rather than greater demands on the heart. When subjects with heart failure expended about 28 foot-pounds of energy 30 to 50 times a minute by pushing a footboard to raise a weight for fifteen minutes or less, plasma dropped 1.5 to 11.2% with an average of 4.9%. The upper limit for persons without heart failure was 1.2%. Values were determined by serum protein, hematocrit, and the dye curve.

Circulation 2:402-408, 1950.



ONCOLOGY

Transmitted Tumor

Chemical carcinogens swallowed by a lactating mother or formed in the body by an abnormal metabolic process may pass to a child in breast milk and produce malignant tumor. After gastric instillation of methylcholanthrene in Wistar rats, Dr. Harry Shay and associates of Temple University, Philadelphia, observed malignant lymphoma in 2.9% of offspring. The same carcinogen, probably the most potent known, can be manufactured from cholesterol and from cholic acid, in the latter case by reactions that occur naturally in the body.

Cancer 3:891-895, 1950.

PHYSIOLOGY

Muscle Contracture

Skeletal muscles deteriorate considerably if steady neurogenic contracture is maintained for a few days. Changes much more severe than those occurring after denervation are enumerated by Dr. Ernst Fischer of Richmond, Va. Muscle weight falls, noncollagenous protein diminishes, and collagen is correspondingly increased. The sarcolemma becomes more permeable to potassium, which is partly replaced by sodium. Vacuoles form and seem to fill with chlorides. Lesions apparently result from shortening of muscle fibers rather than from tonic innervation.

Eighteenth International Physiological Congress, Aug. 15-18, 1950, pp. 202-203.

THE NAME TO DEPEND ON...

DEVILBISS

**A comprehensive development and research
program assures you of the most efficient
in nebulizers and atomizers**

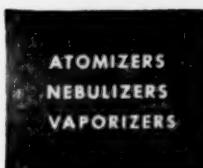


The continuing DeVilbiss research program, now more comprehensive than ever before, is keeping pace with the latest findings in the field of aerosol therapy.

DeVilbiss' close cooperation, particularly with the pharmaceutical houses and research foundations, has resulted in the exactly *right* piece of equipment being always available for new techniques. There is an atomizer available for any new combination of pH, viscosity, or surface tension likely to be encountered.

DeVilbiss deserves your confidence. Over the years, no other manufacturer of similar equipment has worked so closely with research development to the end that the physician would have exactly the *right* type of equipment for the job at hand.

De Vilbiss...



BASIC SCIENCE BRIEFS

HEMODYNAMICS

Blood Flow in Dependent Limbs

An arm or leg with ischemic vascular disease is often most comfortable if allowed to hang down loosely while the body is recumbent. The blood flow probably improves with vertical position, explain Dr. Robert W. Wilkins and associates of Massachusetts Memorial Hospitals and Boston University. A 15% rise over that in the horizontal position was observed in subjects with good circulation. Since the arteriovenous oxygen difference varies inversely with rate of flow, values of antecubital, femoral, and popliteal samples were determined. Slight muscular tension in the lowered part greatly increased the arteriovenous ratio and presumably oxygen consumption, an argument against active motion such as Buerger's exercise for peripheral vascular occlusion.

Circulation 2:173-179, 1950.



"Your diagnosis is very inconsiderate, Doctor. I'm not planning to be married until June."

CARDIOLOGY

Antidiuretic Urine

Chronic congestive heart failure may be listed with eclampsia, cirrhosis of the liver, Cushing's syndrome, and other conditions associated with antidiuretic material in urine. A substance that reduced renal excretion in dogs was obtained from 12 of 15 edematous cardiac patients by Dr. Bernard A. Bercu and associates of Washington University, St. Louis. Urine was concentrated, dialyzed, filtered, and then injected intravenously into animals previously given large amounts of water. In behavior, the antidiuretic substance did not resemble commercial Pitressin. Kidney function was not limited by urine from healthy subjects or by physiologic saline solution.

Circulation 2:409-413, 1950.

ONCOLOGY

Estrogen-induced Tumor

Nodules that form in guinea pigs after implantation of estrogen pellets are essentially desmoid in type. The term fibroid is misleading. After examination of tissues prepared with special stains, Dr. Eli M. Nadel of Jefferson Medical College, Philadelphia, found the growth not to be malignant fibrosarcoma, since metastases and cellular or nuclear pleomorphism failed to appear. But the tumor is invasive, therefore not like the usual benign fibroma. Smooth muscle, which is probably incorporated from adjacent areas, is too sparse to warrant the classification of leiomyoma.

J. Nat. Cancer Inst. 10:1043-1065, 1950.

*A New
Pleasant Tasting-*



BACITRACIN TROCHE*

WITH BENZOCAINE

FOR CONTROL OF LOCAL DISCOMFORT

The clinical efficacy of bacitracin troches has been further expanded by the incorporation of 5 mg. of benzocaine per troche. The local anesthetic action so provided, in addition to the specific antibiotic effect of the bacitracin, makes for a wider field of usefulness in the treatment of pharyngitis, tonsillitis, and gingivitis. These troches remain intact for a pro-

longed period thereby exerting an extended anesthetic influence and creating high salivary bacitracin levels.

The confection-like chocolate taste of C.S.C. Bacitracin Troches with Benzocaine makes for universal patient acceptance. Their candy-like taste and appearance encourage their continued use by adults as well as by older children.



C. S. C. Bacitracin Troches with Benzocaine are available on prescription through all pharmacies in bottles of 25.

C.S.C. Pharmaceuticals A DIVISION OF
COMMERCIAL SOLVENTS CORPORATION
17 EAST 42ND STREET, NEW YORK 17, N.Y.

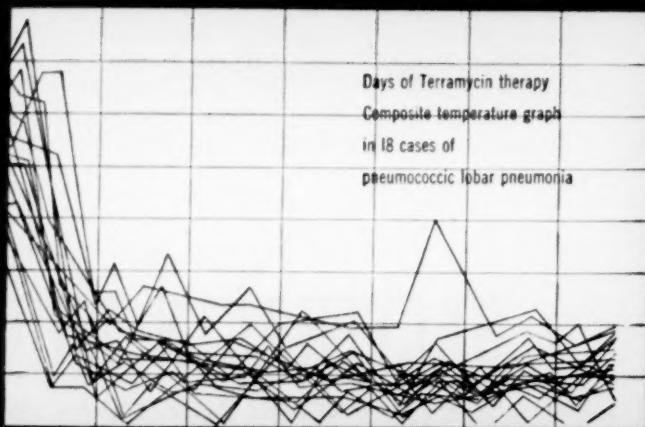


*Each C.S.C. Bacitracin Troche with Benzocaine contains
1000 UNITS OF BACITRACIN AND 5 MG. OF BENZOCAINE*

PNEUMOCOCCIC LOBAR PNEUMONIA

DEGREES FAHRENHEIT

Days of Terramycin therapy
Composite temperature graph
in 18 cases of
pneumococcic lobar pneumonia



Terra

"With the exception of one subject...there was a dramatic fall in the temperature within twenty-four to thirty-six hours after the first dose of terramycin was given. The major decline in fever occurred during the first twenty-four hours after institution of therapy."

"Improvement in the acute symptoms...usually coincided with the fall in temperature. In many instances...symptomatic improvement actually preceded the fall in temperature."

Melcher, G. W., Gibson, C. D., Rose, H. M., and Kneeland, Y.: J. A. M. A. 143:1303 (Aug. 12) 1950.

Antibiotic Division

Pfizer

"Excellent" and "dramatic" response

"The response to terramycin therapy was considered excellent in every case and there were no cases in which treatment failed."

Melcher, G. W.; Gibson, C. D.; Rose, H. M., and Kneeland, Y.: J.A.M.A. 143:1303 (Aug. 12) 1950.

Dosage: On the basis of findings obtained in over 150 leading medical research centers, 2 to 3 Gm. daily by mouth in divided doses q. 6 h. is suggested for most acute infections.

Supplied: 250 mg. capsules, bottles of 16 and 100;
100 mg. capsules, bottles of 25 and 100;
50 mg. capsules, bottles of 25 and 100.

mycin

HYDROCHLORIDE



***Terramycin may be highly effective
even when other antibiotics fail.***

***Terramycin may be well tolerated
even when other antibiotics are not.***

Short Reports

CARDIOLOGY

Stress Endocarditis

Endocarditis with valvular lesions of bacterial or rheumatic type may be produced by arteriovenous fistula alone. When dogs had large shunts for more than four weeks, without intentional introduction of bacteria, 75% were affected. Blood cultures often yielded coliform bacteria. Dr. C. W. Lillehei and associates of the University of Minnesota, Minneapolis, observed enlargement of adrenal glands in all cases, even before cardiac involvement. In an instance of *Streptococcus viridans* septicemia, acute proliferative glomerulonephritis also developed. The fistulas were aortic-caval, iliac or femoral, constructed on one or both sides.

Ann. Surg. 132:577-590, 1950.

ENDOCRINOLOGY

Oral Cortisone Therapy

Cortisone is effective when taken by mouth. Approximately the dosage used for intramuscular injection is employed by Dr. R. H. Freyberg and associates of the Hospital for Special Surgery and Cornell University, New York City. In 4 cases of rheumatoid arthritis, 300 mg. was administered the first day, 200 mg. the second, and 100 or 200 mg. thereafter in ten- to twenty-day courses. Results were comparable to those of parenteral therapy.

Science 112:429, 1950.

SURGERY

Intestinal Antiseptic

Neomycin, isolated from *Streptomyces fradiae*, is a useful agent for preoperative sterilization of the bowel, report Dr. Edgar J. Poth and associates of the University of Texas, Galveston. A purge of castor oil is usually given, then 1 gm. of neomycin orally, every four hours for three days. Bacteria are eliminated, and the bowel is emptied of feces and gas. The drug is nontoxic and poorly absorbed from the alimentary tract. Adequate food and fluid intake is possible during administration.

Texas Rep. Biol. & Med. 8:353-360, 1950.

TREATMENT

New Diuretic Agent

Cumertilin, a mercurial derivative of coumarin but without effect on prothrombin activity, appears to have greater diuretic action than some commonly used organic mercurial diuretics and is no more toxic. The preparation prepared at a nearly neutral pH is chemically stable and is not locally irritating or excessively painful when given intramuscularly. Drs. Shepard Shapiro and Murray Weiner of New York University, New York City, observed no evidence of systemic toxicity in a series of 105 intramuscular injections of 2-cc. doses.

J. Lab. & Clin. Med. 36:224-229, 1950.

Control of pain and
associated nervous
tension requires

both

*analgesia
and
sedation*

'EMPIRAL'

TRADE
MARK

has the DOUBLE ACTION which relieves
pain and promotes restfulness

Each compressed product of 'Empiral' contains:

Phenobarbital	gr. $\frac{1}{4}$
Acetophenetidin	gr. $2\frac{1}{2}$
Aspirin (Acetylsalicylic Acid)	gr. $3\frac{1}{2}$

*Also available 'TABLOID' 'EMPIRIN' COMPOUND®
with and without Codeine Phosphate*



BURROUGHS WELLCOME & CO. (U.S.A.) INC. TUCKAHOE 7, NEW YORK

SHORT REPORTS

ALLERGY

Device for Scratch Test

Painless scratches uniform in length and depth can be made by expert or novice with an instrument the size of a stubby fountain pen. Devised by Dr. Ira R. Morrison, the micrometer-scratcher has been used for eighteen months in the Allergy Clinic of the University of Kansas Hospitals, Atchison. A steel shaft is enclosed in steel and fiber tubes. A knob at the top is rotated to cock the mainspring, and the bottom of the shaft carries the points. The base is adjusted to the desired depth. A second spring prevents release of the trigger until 2 lb. of pressure is applied to the skin. The points then whirl through an arc of 270°, producing a circular groove 1/1,000 to 25/1,000 in. deep. Once set, the mechanism is seldom readjusted except for unusually delicate or coarse skin.

Ann. Allergy 8:679-681, 1950.

VENEREOLOGY

Diagnosis of Neurosyphilis

Asymptomatic neurosyphilis may be overlooked unless examination of cerebrospinal fluid is made by at least two laboratories. The fluid obtained from a single spinal puncture is divided by Dr. Richard A. Koch of the San Francisco Department of Public Health. Kolmer tests done by official city and state laboratories directly conflicted in 183 cases, 3% of the eight-year total. Approximately 24 cases would have been missed if fluid had been entrusted to either institution alone.

J. Ven. Dis. Inform. 31:251-254, 1950.

PATHOLOGY

Pancreatitis Etiology

Acute and chronic relapsing pancreatitis caused by malnutrition may be due to protein deficiency. Diffuse inflammation produced in rats by ethionine, perhaps through interference with methionine metabolism and protein synthesis, is prevented by methionine, report Drs. Emmanuel Farber and Hans Popper of Northwestern University, Chicago. The gland is not protected by cysteine or by glucose. Glucose prevents fatty liver after administration of ethionine.

Proc. Soc. Exper. Biol. & Med. 74:838-840, 1950.

AWARDS

Papanicolaou Honored

In recognition of the potential value of the Papanicolaou cancer diagnostic method in the prevention of cancer, Dr. George N. Papanicolaou of Cornell University has received one of the \$1,000 Lasker Awards of the American Public Health Association.

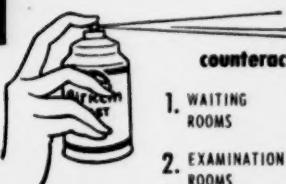
DIAGNOSIS

Amyloidosis

A reduction in circulating lymphocytes is frequently seen in patients with amyloidosis. Primary amyloidosis is particularly apt to be associated with lymphocytopenia. The decrease in lymphocytes apparently is unrelated to the organs involved by the disease, find Dr. O. Peräsalo and associates of the University Clinic, Helsinki. Amyloidosis produced in animals is also associated with lymphocytopenia.

Ann. Med. Int. Fenniae 39:34-38, 1950.

INSTANT RELIEF from ODORS with *fast-acting* AIRKEM MIST



AIRKEM

counteracts odors from:

1. WAITING ROOMS
2. EXAMINATION ROOMS
3. HUMAN OCCUPANCY
4. TOBACCO SMOKE
5. ODOROUS DISEASES
6. MEDICATIONS
7. UTILITY ROOMS
8. SOILED DRESSINGS
9. LAVATORIES

PABALATE®

Percentage of
rheumatic cases
for which various
doses were
required for
effective relief

Time required

for effective relief



72% 24%
Percentage of patients in whom need for new
dose preceded scheduled administration



SODIUM SALICYLATE 55.2% PABALATE 0%
Percentage of patients exhibiting toxicity

CLINICAL EFFICACY

PROLONGED (24 HOUR) RELIEF

COMPLETE FREEDOM FROM TOXICITY



antirheumatic superiority . . .

The greater efficacy of this preparation is clearly demonstrated when one considers that whereas only sixty-eight per cent of the patients got relief from 0.6 Gm. doses of sodium salicylate, ninety-two per cent got equal relief on the same dosage of sodium salicylate in the form of Pabalate[®] probably because of its proportionate benzoate component. Toxicity was not reported by any of the patients during the administration.

Journal Lancet
1950, 782-785.

Experience in the administration of the antirheumatic Pabalate confirms the efficacy, reliability and safety⁶ of its synergistic combination of salicylate and para-aminobenzoic acid.^{1,2,3,4,5} Pabalate has been reported not only to provide "twenty-four hour pain relief,"⁶ but its use (unlike that of salicylate alone) carries a high degree of freedom from toxic reactions.⁶

INDICATIONS rheumatoid arthritis, fibrositis, acute rheumatic fever, gout, osteoarthritis. The Liquid is also recommended as a replacement for analgesic-antipyretic medication generally.

FORMULA each Pabalate Tablet or each 5 cc. (one teaspoonful) of Pabalate Liquid contains sodium salicylate, U.S.P. (5 grs.) 0.3 Gm., para-aminobenzoic acid (as the sodium salt) (5 grs.) 0.3 Gm.

SUPPLIED Pabalate Tablets are supplied in bottles of 100 and 500; Pabalate Liquid in pints and gallons.

REFERENCES

1. Beckman, H.: Treatment in General Practice, 6th ed., W. B. Saunders Co., Phila., 1948.
2. Belisle, M.: Union méd. du Canada, 77:392, 1948.
3. Dry, T. J. et al.: Proc. Staff Meet., Mayo Clin., 21:497, 1946.
4. Rosenblum, H. and Fraser, L. E.: Proc. Soc. Exper. Biol. & Med., 65:178, 1947.
5. Salassa, R. M., et al.: J. Lab. & Clin. Med., 33:1393, 1948.
6. Smith, R. T.: J. Lancet, 70:192, 1950.

A. H. ROBINS CO., INC., Richmond 20, Va.

Ethical Pharmaceuticals of Merit since 1878

PABALATE[®]



⁶The data for these graphs are derived from the tabular material accompanying "Treatment of Rheumatoid Arthritis and other Rheumatic Conditions with Salicylate and Para-Aminobenzoic Acid: a study of 125 patients," by Richard T. Smith, J. Lancet, 70:192, 1950.

SHORT REPORTS

MILITARY MEDICINE

Report on Medical Care in Korea

Accomplishments of the military medical services in Korea indicate that the record of the services in World War II will be surpassed. Of every 4 wounded men admitted to a hospital in World War II, 3 were returned to duty. In one evacuation hospital in Korea, of 18,000 men admitted during a three-month period, only 40 died. Even in forward areas, less than 1 death for every 100 admissions has been recorded. Admissions for disease have been only slightly higher than for wounds and nonbattle injuries, despite the fact that Korea has been the point of origin of some of the most extensive epidemics the world has known, including cholera, plague, dysentery, typhus, and typhoid fever. Maj. Gen. Raymond W. Bliss, Surgeon General of the Army, credited the result to what he called "total medicine." First the planning, administration, and medical logistical operations have been brilliantly executed. Secondly, prophylactic measures have succeeded in overcoming dangers to health inherent in the Korean campaign. The third element has been the high level of professional accomplishment by the medical personnel in Korea, and the fourth has been the support given by the laboratory and research phase of medicine in the Far East Command. The medical personnel in Korea is composed chiefly of physicians of the Regular Army Medical Corps aided by about 100 young reserve officers just finished with internships.

DERMATOLOGY

Herpes Zoster Therapy

Protamide, a colloidal solution of enzyme from hog stomach, relieves pain of herpes zoster and hastens disappearance of vesicles and crusts. Comdr. William C. Marsh, M.C., U.S.N., of the U.S. Naval Hospital, Bethesda, Md., injects 1.3 cc., the contents of 1 ampule, intramuscularly once a day. Administration is painless. Results were good to excellent in 28 of 31 cases and no unfavorable reactions were observed.

U. S. Armed Forces M. J. 1:1045-1047, 1950.

ALLERGY

Rubber Sponge Dermatitis

Allergic eczematous contact dermatitis may be caused by applying cosmetics with a rubber sponge. In 26 cases observed by Dorothy Furman and Drs. Alexander A. Fisher and Morris Leider at the New York University-Bellevue Medical Center, New York City, lesions were especially prominent about the mouth and eyes. Reactions were invariably provoked in patch tests with the material employed. After use of the sponges was stopped, the skin healed rapidly.

J. Invest. Dermat. 15:223-231, 1950.

EDUCATION

\$50,000 in Scholarships

During the twelve months ending July 1950, the John and Mary R. Markle Foundation gave half a million dollars to twenty medical schools. The fund is to maintain a scholar in medical sciences at each school for five years. The purpose of the grants is to build up research staffs at the schools.

Gelatine in Diets for Older Patients

The tired digestive system, whether or not restricted to an invalid's diet, requires meals that are bland, easily digestible, appetizing and nourishing.

For these patients doctors often prescribe frequent dishes made with Knox Unflavored Gelatine. With Knox it is possible to make an endless variety of salads, main dishes and desserts that fulfill all these requirements.

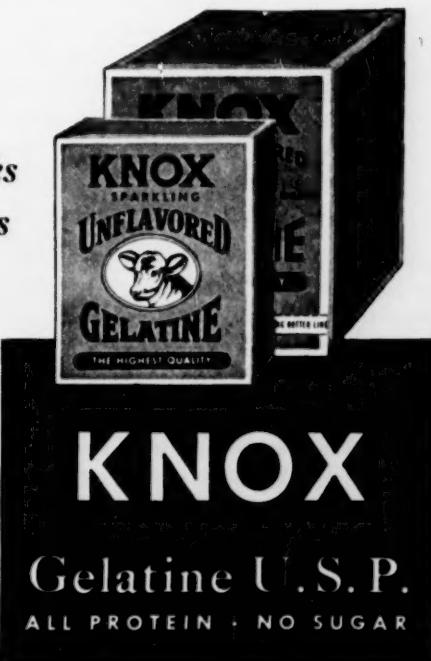
Unlike factory-flavored gelatin dessert powders with their high sugar and acid content, Knox is all protein, with no sugar content. Doctors recognize the supplementary protein advantages of Knox Gelatine.

FREE

*...Dietary Guide Books
for Special Conditions*

A series of dietary booklets have been published by Knox, containing food-value charts, menus and recipes for use in conditions requiring special diets. They are available to you free upon request. Knox Gelatine, Box R-43, Johnstown, N. Y.

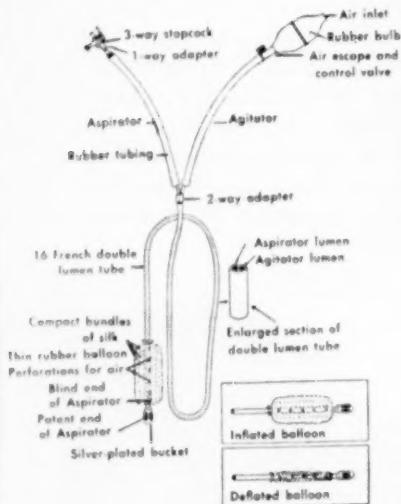
Available at grocery stores in convenient 4-envelope and 32-envelope packages.



ONCOLOGY

Abrasive Gastric Balloon

An inflated brush that rubs malignant cells from the stomach wall provides material for more accurate diagnosis of cancer than routine aspiration. The rough-surfaced rubber bag utilized by Dr. Frederick G. Panico and associates of Cornell Uni-



versity and New York Hospital, New York City, is made by knotting short pieces of braided silk to the outside of a condom (see illustration). Attached is a No. 16 French double lumen tube, 100 cm. long, marked at 45, 60, and 75 cm. The aspirator lumen fitted with a silver-plated bucket leads proximally to a syringe. The inflator lumen opens inside the balloon and is connected to a bulb. The deflated rubber bag, which is dipped in Ringer's solution, is swallowed beyond the 60-cm. mark, gas-

tric contents are aspirated, and the balloon is distended with 75 to 100 cc. of air. Peristalsis and gentle manipulation move the apparatus to the pylorus and, after deflation, into the duodenum. The balloon is slowly refilled and drawn back to the cardia, and the sampling procedure is repeated five or more times in an hour. Gastric juice is removed by continuous suction. Material for smears is obtained directly from the brush or washed off with Ringer's solution. By this method cancer was diagnosed in 14 of 17 cases and suspected in 1, and noncancerous mucosa was recognized in 14 of 16 cases. Smears of gastric contents collected in the usual manner had suspicious or malignant cells from only 5 of 17 cancers.

J.A.M.A. 143:1308-1311, 1950.

EPIDEMIOLOGY

Water-borne Tularemia

The U.S. Public Health Service reports 4 cases of tularemia contracted from drinking contaminated water. The 4 patients, all present or previous occupants of the same Montana ranch, had had no close contact with rabbits or other rodents. Investigations by Dr. W. L. Jellison and others revealed no evidence of contaminated food, but tests of the water supply showed presence of tularemia bacilli. Although cases of tularemia in Russia have been traced to contaminated drinking water, no instances of infection from this source have been previously reported in the United States. The chlorination process in most municipal water systems kills the bacillus.

the
most
effective
known
iron therapy



White's MOL-IRON®

Molybdenized Ferrous Sulfate—a
co-precipitated complex of ferrous
sulfate and molybdenum oxide.

Carefully evaluated in several series of controlled investigations, White's Mol-Iron has proved to be strikingly more effective as a hemopoietic agent than unmodified ferrous sulfate,^{1,2,3} as well as exceptionally well tolerated.^{4,5}

Indicated in iron-deficiency, secondary anemias.

SUPPLIED: Mol-Iron Tablets—small, easily swallowed. Bottles of 100 and 1000.

Also available—extremely palatable Mol-Iron Liquid, particularly suited to children's tastes. Bottles of 12 fluid ounces.

New

Mol-Iron with Liver and Vitamins—for the
nutritionally complicated hypochromic anemia.

Mol-Iron with Calcium and Vitamin D—for the
pregnant or lactating patient.

1. Dieckmann, W. J., and Priddle, H. D.: Am. J. Obstet. & Gynec. 57:541, 1949.
2. Chesley, R. F., and Annitto, J. E.: Bull. Margaret Hague Mat. Hosp. 3:68, 1948.
3. Dieckmann, W. J., et al.: Am. J. Obstet. & Gynec. 59:442, 1950.
4. Kelly, H. T.: Pennsylvania M. J. 51:999, 1948.
5. Neary, E. R.: Am. J. Med. Sc. 212:76, 1946.

White Laboratories, Inc., Pharmaceutical Manufacturers, Newark, 7, N. J.

SHORT REPORTS

PUBLIC HEALTH

Medical Topics on TV

A series of thirteen Sunday afternoon television shows featuring a discussion of medical subjects has been launched with the title "Meet Your Doctor." Each week the performance will be presented by an organized medical group. The first program, on October 1, was given by the Arthritis and Rheumatism Foundation. The sponsor is the Rybutol Division of the Vitamin Corporation of America. Collaborating groups include the New York Heart Association, the National Multiple Sclerosis Society, the Cerebral Palsy League, and the American Cancer Society.

TREATMENT

Oral Saline in Lieu of Plasma for Shock

Salt water taken by mouth may be as effective as blood plasma in the emergency treatment of shock from burns or other injuries. While in no way lessening the importance of blood banks, the salt water method would be important in treating the large number of casualties from any great disaster such as the atom bombing of a civilian population. The treatment was recommended to meet such a situation by the Surgery Study Section, an advisory body to the National Institutes of Health. Members of the section are Drs. Frederick A. Coller, University of Michigan, chairman; Claude S. Beck, Western Reserve University; Loren R. Chandler, Stanford University; Lester A. Dragstedt, University of Chicago; Daniel C. Elkin, Emory University; C. A. Moyer, University

of Texas; Harris B. Shumacker, Jr., Indiana University; Owen H. Wangensteen, University of Minnesota; Allen O. Whipple, New York City; H. L. Skinner, Staten Island Marine Hospital; Henry Beecher, Harvard University; J. Gordon Lee, Washington, D.C.; Howard R. Lawrence, Francis E. Warren Air Force Base Hospital, Wyoming; and G. Halsey Hunt, U.S. Public Health Service. For ingestion, a level teaspoonful of table salt and one-half teaspoonful of baking soda are dissolved in a quart of water to make a palatable solution. The patient is encouraged to drink several quarts each day, the only limitation being the ability of the patient to drink the solution. Since thirst accompanies serious burn, patients usually will voluntarily consume sufficient amounts of the liquid if no other drinking fluid is permitted the first few days.

VITAL STATISTICS

Diabetic Physicians

Doctors with diabetes live almost as long as other physicians, on the average, and somewhat longer than nonmedical patients with the disease. Dr. Robert F. Bradley of George F. Baker Clinic, Boston, offers advice based on records of 475 physicians with diabetes mellitus who consulted the Joslin group between 1898 and 1948. A young man with diabetes can enter medical school without fear if his illness is under control and of less than fifteen years' duration, if he has no degenerative complications. Later onset is no reason for giving up the practice of medicine.

J.A.M.A. 144:444-447, 1950.

WHY



IN THE REDUCING DIET

LOW-CALORIE! . . . only 23 calories per double-square wafer

NOURISHING! . . . all the protein, minerals, B-vitamin of whole-grain rye

SATISFYING! . . . so crisp and "chewy" one naturally eats more slowly and is satisfied with less

FILLING! . . . absorbs moisture which increases bulk, delays hunger

DELICIOUS! . . . reducers enjoy it *without "fattening"* spreads

FREE Diet Booklets . . .

to save you hours of consultation time! Nutritionally sound, easy-to-follow guides to help overweights reduce safely.



"LOW-CALORIE DIETS" — 1200 calories for women; 1800 for men. Gives wide food choice, menus, recipes.

"THROUGH THE LOOKING GLASS" — 1500 calories. Especially written for teen-age girls. Gives recipes, menus, special tips.

----- USE COUPON TO ORDER -----

RALSTON PURINA COMPANY,
LM-C Checkerboard Square, St. Louis 2, Mo.

Please send (indicate quantity):

C 3049 "LOW-CALORIE DIETS" . . . for adults.

Imprinted with your name & address? Yes No

C 966 "THROUGH THE LOOKING GLASS" . . . for teen-age girls.

Name _____

M.D. _____

Street _____

City _____

Zone _____ State _____

ACS Clinical Congress

(Continued from page 97)

roentgenograms of the bronchial tree and disappears in less than twenty-four hours.

No significant abnormalities were produced by the agent in the organs of guinea pigs and dogs. The two chief advantages over lipiodol are a water-soluble base, obviating the possibility of lipoid pneumonia, and rapid disappearance, making roentgenograms of the chest possible immediately after bronchography.

Tracheotomy in the Comatose

Though the importance of adequate airway and maximum oxygenation of cerebral tissue is well known, the usual methods for attainment have not been completely satisfactory in deeply comatose patients. In selected cases, more satisfactory oxygenation of the brain may be accomplished by the institution of elective tracheotomy.

Drs. E. W. Skwarok and G. L. Maltby of Maine General Hospital, Portland, report satisfactory outcome by judicious and early use of tracheotomy. In cases of severe cerebral trauma, so-called "allowable" mortality may be further reduced if the proper indications are observed in the use of tracheotomy.

Nervous System Tumors

Several papers were presented on diagnosis and external localization of central nervous system tumors. Drs. Loyal Davis, John Martin, and Moses Ashkenazy of Northwestern University reported that in 200 pa-

tients suspected of having central nervous system tumors, radioactive di-iodo-fluorescein accurately localized 92% of the lesions later verified by surgery or corroborated by pneumonography or angiography.

The radiodye test is simple, safe, painless, and reliable. A Geiger-Müller tube, a counting-rate meter, and a mechanical graphic recorder are required. The negative findings, 95% accurate, are important in distinguishing cerebral neoplasms from hypertensive cerebrovascular accidents, perichiasmal arachnoiditis, and ruptured intracranial aneurysms, particularly in the presence of papilledema or jacksonian epilepsy. Localization is more precise than with electroencephalography or pneumonography, and tumor recurrences can be demonstrated readily.

Technics of counting have been evolved so that midline tumors, such as those of the pituitary, brain-stem, or posterior fossa, may be localized as accurately as the more superficially situated cerebral neoplasms.

Dr. Edward B. Schlesinger of Columbia University reported that the method failed completely in localization of large cystic lesions, abscess, subdural hematoma, subdural hygroma, intracerebral hematoma, and space-occupying vascular malformations.

Radioactive potassium, K^{42} , has been successfully employed in the localization of 20 cerebral tumors by Drs. Bertram Silverstone, William H. Sweet, and Richard J. Ireton of Massachusetts General Hospital and is now in routine use there. Gamma radiation of K^{42} permits, in certain

(Continued on page 122)

Doctor . . .

**Here are two great Spot Tests
that simplify Urinalysis.**

GALATEST

The simplest, fastest urine
sugar test known.

ACETONE TEST

(Denco)

For the rapid detection of Acetone
in urine or in blood plasma.



A LITTLE POWDER
A LITTLE URINE

COLOR REACTION IMMEDIATELY



Combination Kit: Contains both tests, a dropper and color chart. Available at all drugstores and surgical supply houses.

BIBLIOGRAPHY

Joslin, E. P., et al: Treatment of Diabetes Mellitus—8 Ed., Phila., Lea & Febiger, 1946—P. 241, 247.

Duncan, G. G., Carey, L. S. & Hudson, M. T.: Medical Clinics of North America—Phila., No., W. B. Saunders, Co., Phila., 1949—P. 1538.

Lowley, D. S. & Kirwin, T. J.: Clinical Urology—Vol. 1, 2 Ed., Balt., Williams & Wilkins, 1944—P. 31.

Duncan, G. G.: Diseases of Metabolism—2 Ed., Phila., W. B. Saunders Co., 1947—P. 735, 736, 737.

Guidotti, F. P. & Winer, J. H.: The Military Surgeon—Vol. 94, Feb., 1944, No. 2.

Bacon, Melvin: The Journal of The Maine Medical Assn.—Vol. 38, July, 1947, No. 7—P. 167.

Stanley, Phyllis: The American Journal of Medical Technology—Vol. 6, No. 6, Nov., 1940 and Vol. 9, No. 1, Jan., 1943.

GALATEST and ACETONE TEST (Denco)

... Spot Tests that require no special laboratory equipment, liquid reagents, or external sources of heat. One or two drops of the specimen to be tested are dropped upon a little of the powder and a color reaction occurs immediately if acetone or reducing sugar is present. False positive reactions do not occur. Because of the simple technique required, error resulting from faulty procedure is eliminated. Both tests are ideally suited for office use, laboratory, bedside, and "mass-testing." Millions of individual tests for urine sugar were carried out in Armed Forces induction and separation centers, and in Diabetes Detection Drives.

The speed, accuracy and economy of Galatest and Acetone Test (Denco) have been well established. Diabetics are easily taught the simple technique. Acetone Test (Denco) may also be used for the detection of blood plasma acetone.

Write for descriptive literature

THE DENVER CHEMICAL MFG. CO., Inc.

Dept. 2, 163 Varick Street, New York 13, N. Y.



For the Person
"ON EDGE"...

and those suffering from
HYPERTENSION
HYPERTHYROIDISM
ARTERIOSCLEROSIS
ENDOCRINE IMBALANCE

The patient who is "on edge" may be, quite literally, "*close to the line where something else begins*": nervous collapse, neurosis, serious functional disorder, or actual organic disease. Vital reserves of energy are exhausted by aimless anxiety, sterile speculation, insomnia, and tension, leaving the way open to more serious conditions.

In particular, the aged person approaching this state is fearful and in need of help, and, as you have

doubtless observed in your own practice, there is an increasing number of older patients with just such nonspecific complaints.

Their basic problems are often environmental and largely beyond your power to change. But you can ease their tension and conserve their strength with mild sedation. Indeed, Housel and Wood state (*GP*, 1:61, May, 1950): "We feel that sedatives are of paramount importance in the treatment of hypertensives since many of these patients are tense, nervous, and unable to sleep."

ORGAPHEN assures exceptionally mild, dependable sedation.

Laboratory tests show that the mild, sedative action of **ORGAPHEN** starts sooner and lasts longer than that of the standard elixir of phenobarbital.

Clinical experience* indicates that this phenomenon is due to synergism of the active elements of **ORGAPHEN**, each fluid dram (one teaspoonful) of which contains:

Phenobarbital $\frac{1}{8}$ grain

ORGANIDIN® 10 minimis

(Iodine organically combined by reaction with glycerin)

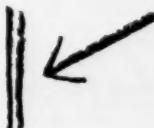
10 minimis contain $\frac{1}{4}$ grain of iodine

Alcohol 7%

For your next "on edge" patient prescribe **ORGAPHEN**, and discover at first hand its low effective dose and more prolonged, mildly sedative action. **ORGAPHEN** is supplied in pint bottles.

Samples and literature on request.

*Slaughter, D.: Report to American Therapeutic Society, Boston, 1950



ORGAPHEN

ELIXIR ORGANIDIN®
and
PHENOBARBITAL

TRADE MARK (WAMPOLE)

HENRY K. WAMPOLE & CO.
INCORPORATED
Manufacturing Pharmacists Since 1872
PHILADELPHIA 23, PA.



Diaparene CHLORIDE

METHYL BENZETHONIUM CHLORIDE

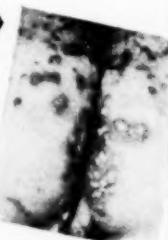
TO REPLACE BORIC ACID^{1,2} AND TALCUM³ POWDERS

For ammonia dermatitis (diaper rash) and skin excoriations in incontinent adults. In diarrhea, to prevent irritations caused by acid or liquid stools, and to dissipate the obnoxious putrefactive odor. Becomes actively bactericidal in moisture. Does not cause granulomatous adhesions.

1. Abramson, H.: "Fatal Boric Acid Poisoning in a Newborn Infant," *Pediatrics* 4:719-22, 1949.
2. Ross, C. A. & Conway, J. F.: "The Dangers of Boric Acid," *American Journal of Surgery*, 80:386-395, 1943.
3. Uchman, A. L., et al.: "Talc Granuloma," *Surg. Gyn. & Obst.* 83:531-546, 1946.

6 month female with severe papulo-pustular ammonia dermatitis, cleared in 8 days exclusively with Diaparene Chloride Ointment, one of three widely prescribed dosage forms.

A postcard will bring you a pad of Diaparene Chloride instruction sheets for home care of baby's diapers, or for nursing of the incontinent adult.



Pharmaceutical Division
HOMEMAKERS' PRODUCTS CORPORATION
380 Second Avenue, New York 10 • Toronto 10

instances, external tumor localization through the intact skull; beta emission is subsequently employed with the beta-sensitive probing counter for precise localization during craniotomy.

Satisfactory isotope ratios occur more promptly than with P^{32} . In emergencies, useful uptake of K^{42} in tumors can be obtained in less than one hour. The short half-life of K^{42} , 12.4 hours, permits repeated use in staged procedures, but radiation characteristics for demarcation of infiltrating tumors with the probing counter are somewhat less precise than with P^{32} .

Adequate evaluation of existing liver damage is of tremendous importance to the surgeon. Cholesterol ester ratios have been suggested as a sensitive, specific, and reliable index of liver damage. Significance of esterified cholesterol in 232 unselected patients was studied by Drs. James M. Harmon, John W. Means, and C. Joseph DeLor of Ohio State University.

The mean value for the total cholesterol in the entire series was 273



"You'll feel much stronger after taking that prescription."

mg. with an ester ratio of 69.9%. In general, a close correlation was found between pathologic ester levels and liver damage. In hepatocellular disease, the total cholesterol was abnormal in 67% of the patients, with 87% having an abnormal ester ratio.

Medium for Skin Banks

Skin for grafting may be preserved in a skin bank if the grafts are kept in the 10% homologous serum and balanced salt solution described by Hanks and Wallace. Sixty full-thickness grafts were studied by Dr. A. G. Marrangoni of the Naval Medical Research Institute, Bethesda, in the form of autografts, isografts, frozen isografts, isografts stored in piloform, and isografts stored in 10% serum. The results indicate that 10% serum is superior to the other media because the serum buffers and dilutes the acids which result from tissue metabolism.

Gelatinized Bone

Dr. Wilson A. Swanner of New York Medical College, reporting on the use of gelatinized bone, stated that as a structural strut a solid graft of compact bone has no substitute. However, supplemental use of ground bone promotes early re-establishment of the vascular elements. The stimulus to bone healing by a preparation of ground bone supported by a nutrient gelatin medium whose pH simulates that of normal blood, cuts healing time in half.

Revascularization of gelatinized bone mass is demonstrable in forty-eight to seventy-two hours. Absorption is slight. The mixture is now being used as an adjunct to solid bone grafts in the spine and the long bones.



**PROTECTS YOU
from
Tax Penalties!**

Most tax penalty cases arise from inadequate business records. Tax examiners want FACTS! Good records . . . not good intentions . . . are your protection against unnecessary tax penalties and embarrassing situations. The DAILY LOG covers all business aspects of a doctor's practice. Every dollar of income and expense may be traced quickly and easily to the original transaction . . . your tax returns verified beyond a doubt. The DAILY LOG is recommended by tax experts, approved by medical journals, preferred by thousands of doctors for 23 years. One handy volume, only \$6.50 complete. Guaranteed.

MAIL COUPON BELOW!

COLWELL PUBLISHING CO.
239 UNIVERSITY AVE.,
CHAMPAIGN, ILLINOIS

Send me sample pages and complete information on the 1951 DAILY LOG for Physicians.

Send me the COLWELL CATALOG of Physicians' record supplies listing over 120 items.

NAME.....

ADDRESS.....

Surgical Nutrition

Fat, although of high caloric value, has been largely neglected in surgical nutrition because of practical difficulties in its absorption and utilization by a large number of sick patients. In like manner, failure of proper fat absorption, with attendant undernutrition, may follow operations on the gastrointestinal tract which result either in a diminution of the digestive enzymes or a reduction of the total absorbing mucosal surface of the small bowel.

Drs. Edwin H. Ellison, Robert M. Zollinger, Mary Martin, and John B. Brown of Ohio State University, Columbus, have improved the efficiency of fat absorption to values approximating normal by the addition of Tween-80, a synthetic emulsifying agent, and purified animal monoglyceride, a member of the natural emulsifying system of the bowel, to the feeding regimes.

Refeeding of bile lost through biliary fistulas and the correction of pancreatic juice deficits following pancreatectomy also lead to an increased absorption of fat. The total caloric intake as influenced by the

improved fat absorption directly affects the degree of nitrogen retention and protein utilization. The use of these substances in tube and jejunostomy feeding mixtures increases caloric value without augmenting volume of concentration.

The major inadequacy of parenteral nutrition, providing sufficient calories for the malnourished patient, has been overcome by Dr. Frederick J. Stare of Harvard University. After extensive work with animals, emulsions prepared by sonic vibration and by high pressure homogenization have been studied in man. Such emulsions supply 1,600 to 3,200 calories per liter and are invaluable adjuncts to dextrose, saline, and protein hydrolysate solutions.

As a source of fat, coconut oil, corn oil, and butter oil have been extensively tried. Best results are obtained with coconut oil to which about 4% of glucose is added. The emulsions have been used successfully in patients with a variety of diseases, ranging in age from seven weeks to eighty-one years. The effect was indicated by favorable clinical response, prevention of further weight loss, gain in weight, and maintenance of positive nitrogen and potassium balance.

Severely ill, nutritionally depleted patients have been found capable of producing antibodies as well as, or better than, healthy controls. Furthermore, antibody production continues to the time of death from wasting disease.

The amount of circulating anti-toxin produced by 25 Schick-negative nutritionally depleted patients and



"Oh, doctor, I bet you prescribe that for all the girls."

(Continued on page 128)



PROTAMIDE... Again Confirmed IN CLINICAL TESTS AT BETHESDA NAVAL HOSPITAL for HERPES ZOSTER

William C. Marsh, Commander (MC)
U.S.N. in a currently published paper,¹
"Treatment of Herpes Zoster With Protamide," which is now available to physicians as a reprint, presents these findings:

An ampul of Protamide was administered intramuscularly daily to thirty-one cases of herpes zoster.

Of the thirty-one cases—twenty-six were relieved of pain in twenty-four hours to four days. Four cases required longer treatment for complete relief. In only one case was pain relief incomplete. (This case may have presented post-herpetic neuralgia, as pain was present for five weeks before treatment. More prolonged therapy is indicated in such cases.)

"The relief of pain was superior to that obtained when using either pituitrin, thiamine chloride, autohemotherapy, sodium iodide or high voltage roentgen therapy. Further, vesicles

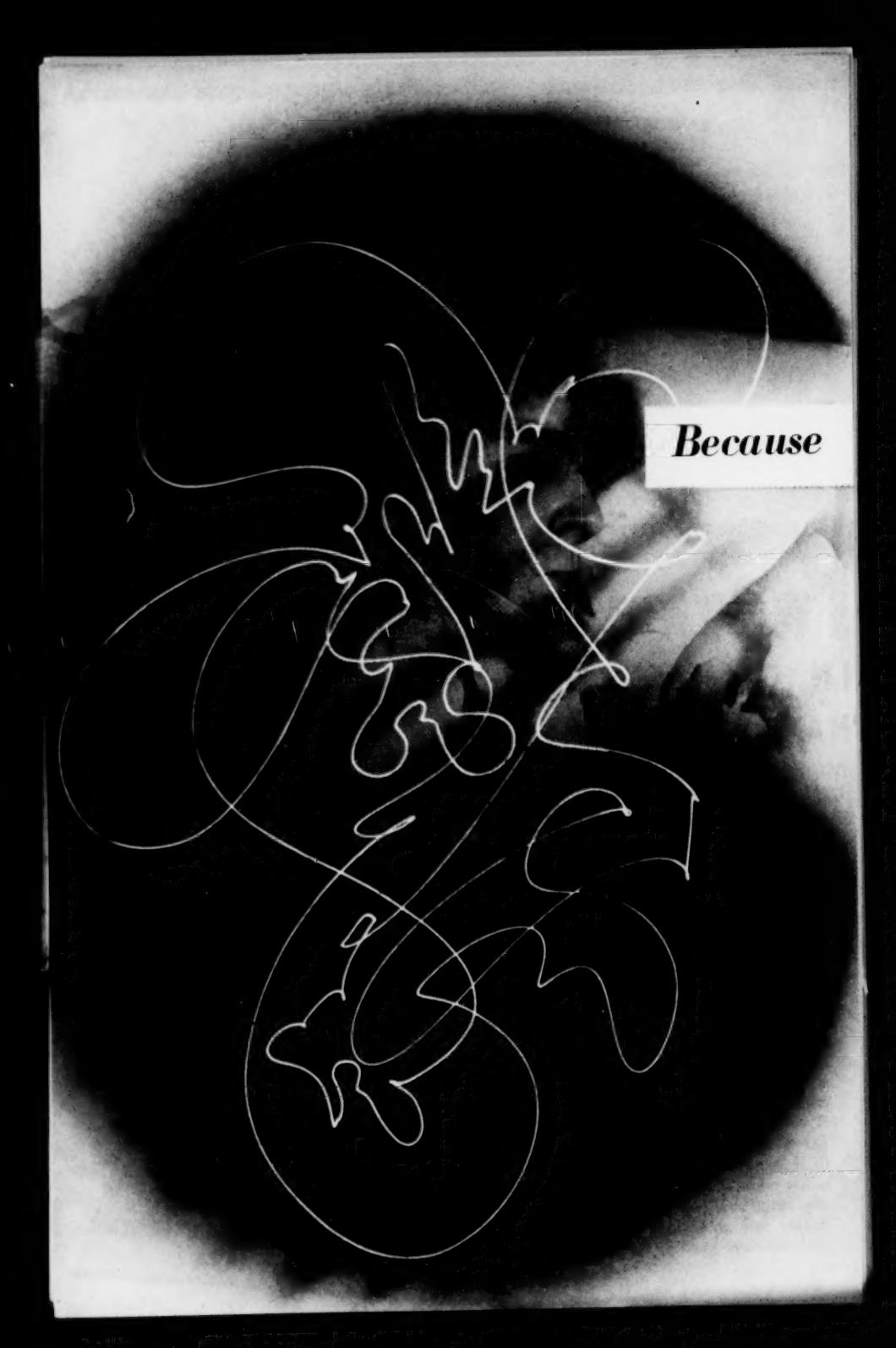
and crusts disappear much more rapidly than in untreated cases.

"The advantages of Protamide are the simplicity and absence of pain in administration, lack of reactions, and its apparent safety."

Additional clinical data on the dramatic results obtained with Protamide in the treatment of Herpes Zoster and the relief of the lightning pains and ataxia of Tabes Dorsalis will be furnished physician on request.

¹U.S. Armed Forces Med. Journal, September, 1950

SHERMAN LABORATORIES
G. H. Sherman, M. D., Founder
BIOLOGICALS • PHARMACEUTICALS
DETROIT 15, MICHIGAN



Because

patients can't

"SLEEP OFF" hypertension...

*prolonged vasodilation should accompany sleep
as well as the day's activities. (One more reason why
NITRANITOL is the most universally prescribed
drug in the management of hypertension.)*

NITRANITOL®

FOR GRADUAL, PROLONGED, SAFE VASODILATION



CINCINNATI • U.S.A.

When vasodilation alone is indicated. *Nitranitol*. (½ gr. mannitol hexanitrate.)

When sedation is desired. *Nitranitol with Phenobarbital*. (½ gr. Phenobarbital combined with ½ gr. mannitol hexanitrate.)

For extra protection against hazards of capillary fragility. *Nitranitol with Phenobarbital and Rutin*. (Combines Rutin 20 mg. with above formula.)

When the threat of cardiac failure exists. *Nitranitol with Phenobarbital and Theophylline*. (½ gr. mannitol hexanitrate combined with ½ gr. Phenobarbital and 1% grs. Theophylline.)

SPECIAL REPORT

by 19 Schick-negative well-nourished adults following a single intramuscular injection of purified diphtheria toxoid has been measured quantitatively by Dr. Henry H. Balch of Bellevue Hospital and New York University.

No relation was found to exist between antibody response, age of the patient, initial antibody level, total serum protein, serum albumin, or serum globulin levels. Also, no relation was found between antibody response and the development of infection.

Cardiac Surgery

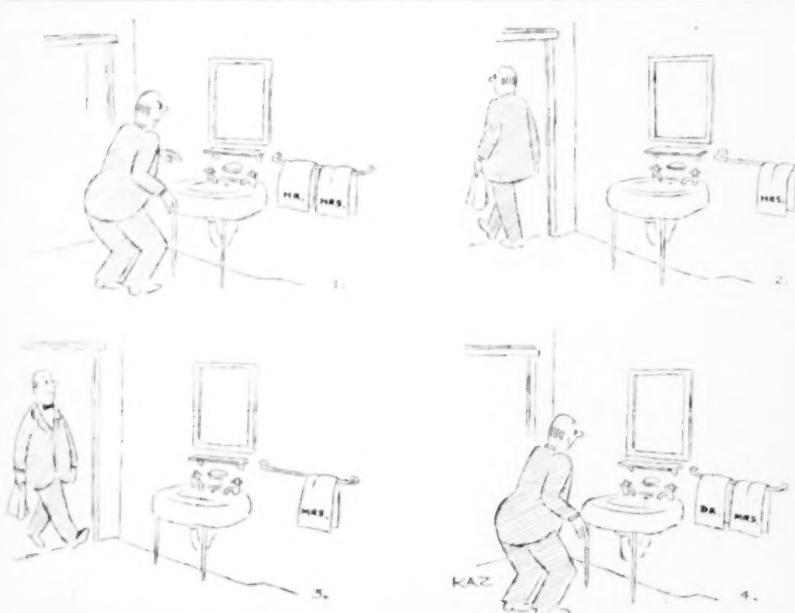
New technics were described for the experimental production and correction of mitral stenosis. Papers were presented on: a method for di-

rectly widening the outlet tract of the right heart by grafting an arterial segment to the stenosed region as an elastic "blowout patch"; a method for the prevention of ventricular fibrillation during operation on the heart; two refinements on the artificial heart or heart pumps; and an electrical pacemaker to start arrested hearts and control slow, fast, or irregularly beating hearts.

The trend seems to be toward making cardiac surgery easier to perform and more widely possible in human beings as the methods for creating a bloodless field, now experimental in animals, are perfected.

Athletic Injuries

Why some baseball players last longer than others was answered in



Again . . .

**Your Key to the Year's
Medical Knowledge**



A desk manual containing
endings by author and subject to the
articles that appeared in the
twelve issues of
MODERN MEDICINE
during 1950.

**MODERN MEDICINE
1950 INDEX**

**SENT WITHOUT
COST OR
OBLIGATION**

The Modern Medicine Index puts at your fingertips all the material published in the 24 issues of Modern Medicine during 1950. Cross-indexed by author and subject, the Index makes accessible every bit of new, practical data on diagnosis and treatment that is contained in . . .

- Over 900 pages of text
- 24 Diagnostix
- 600 abstracts by
1,100 authors
- 60 Special Articles
and Exhibits

YOUR FREE COPY

12-1

MODERN MEDICINE

84 South 10th St., Minneapolis 3, Minn.

Please send me, without charge or obligation, a copy of the 1950 Modern Medicine Index as soon as it is available.

Name PLEASE PRINT

Address

City Zone State

Mail the coupon to
reserve your 1950
Modern Medicine
Index.

SPECIAL REPORT

the symposium on sports injuries. The management of seemingly slight injuries in many cases determines the future of a professional athlete. Proper diagnosis and understanding of the pathology of the more common injuries, such as sprains, strains, and contusions, and immediate treatment are essential.

Dr. Augustus Thorndike of Harvard University expressed amazement at the number of practitioners who do not recognize the early lesion and will immerse the acute sprain in hot water and, as a result, produce large hemarthrosis.

Dr. Robert Hyland of St. Louis has found in experience with the St. Louis Cardinals and the St. Louis Browns that physical examinations

of the players after the playing season enable him to find and correct defects, thus prolonging the career of many players. Conservatism in the treatment of athletes is the essence of wisdom. Although long convalescing periods are distasteful, the patient may extend his career by following such a course.

Tumor Retardant

Drs. Charles E. Friedgood and Charles B. Ripstein of Maimonides Hospital, Brooklyn, reported that Furacin, a synthetic drug derived from furfural, a by-product of flour and soybeans, retards the growth of a transplanted fibrosarcoma in mice. Since cortical hypertrophy was observed in the treated animals, the

LAVORIS
MOUTHWASH AND GARGLE

Tangy
Cinnamon-clove
flavor

ACTIVE INGREDIENTS
Zinc Chloride - Menthol
Formaldehyde - Saccharine
Oil Cinnamon - Oil Cloves
Alcohol 5%

For the Patient's Comfort

The distinctive cleansing and invigorating action of Lavoris combined with its pleasant, refreshing taste, make it most welcome in the sickroom.

THE LAVORIS COMPANY • MINNEAPOLIS 1, MINN.

effect may be exerted indirectly through the adrenal gland.

Adrenalectomized, tumor-bearing mice were not benefited but in other mice the effects of the drug were comparable to those of ACTH. Mice with sarcoma usually die in about three weeks. When given Furacin, mice lived thirty-eight to forty days; the cancer cells became smaller and some cells died.

The drug is given orally or parenterally to patients.

Costovercion Thoracoplasty

Drs. Richard H. Overholt and Leo J. Kenney of Tufts College have developed a new one-stage thoracoplasty in which the previously discarded rib segments are inverted and utilized. The procedure is called *costovercion thoracoplasty*.

The resected rib segments are inverted and fixed in place so as to provide a bony, concave, supporting framework against the soft underlying lung. This immediately stabilizes the decorticated area and prevents development of a dangerous degree of paradoxical motion. The desired collapse is attained at once and is maintained permanently in the new position. Eventually, periosteum will regenerate beneath the inverted ribs to form a stiff, unyielding, bony plate.

No deaths, bronchogenic spreads, or exacerbations have occurred from the operation. More cases and longer observation will be required for evaluation of the procedure.

**For controlled
Rate and Rhythm.**



Through more precise control of contractile force and rhythm, Digitaline Nativelle maintains the maximum efficiency obtainable. *Maintenance is positive because absorption is complete and the rate of dissipation is uniform; providing full digitalis effect between doses.*

DIGITALINE NATIVELLE

Chief active principle* of digitalis purpurea

(digitoxin)

*Not an adventitious mixture of glycosides

MAINTENANCE: 0.1 or 0.2 mg. daily depending on patients' response.

CHANGE-OVER: 0.1 or 0.2 mg. Digitaline Nativelle replaces 0.1 or 0.2 gm. whole leaf.

RAPID DIGITALIZATION: 0.6 mg. initially, followed by 0.2 or 0.4 mg. every 3 hours until digitalized. Send for brochure "Modern Digitalis Therapy" Varick Pharmacal Co. Inc. (Div. E. Fougera & Co. Inc.), 75 Varick St., New York

Current Books & Pamphlets

This catalogue is compiled from all available sources, American and foreign, to insure a complete listing of the month's releases.

Medicine

THE BRITISH ENCYCLOPAEDIA OF MEDICAL PRACTICE edited by Lord Horder. 2d ed. Butterworth & Co., London. £3 per vol.

SIMMONDS' DISEASE by R. F. Farquharson. 93 pp., ill. Charles C Thomas, Springfield, Ill. \$2

ASTHMA by Clement Francis. 50 pp., ill. William Heinemann Medical Books, London. 5s.

MANUAL OF RHEUMATIC DISEASES by W. Paul Holbrook and Donald F. Hill. 182 pp., ill. Year Book Publishers, Chicago. \$4.25

INTER-ALLIED CONFERENCES ON WAR MEDICINE, 1942-1945 edited by Sir Henry L. Tidy. 531 pp., ill. Staples Press, London. 50s.

Psychology

A HISTORY OF EXPERIMENTAL PSYCHOLOGY by Edwin G. Boring. 2d ed. 777 pp. Appleton-Century-Crofts, New York City. \$6

PSYCHOLOGY AND MENTAL HEALTH: A CONTRIBUTION TO DEVELOPMENTAL PSYCHOLOGY by James A. Hadfield. 444 pp. Macmillan Co., New York City. \$2.75



Surgery

LA CHIRURGIA DELLE MALFORMAZIONI CONGENITE DEL CUORE E DEI GROSSI VASI by Giovanni d'Ettico. 156 pp., ill. A. Morano, Editore, Napoli. 800 lire.

Die CHIRURGIE DES PANCREAS by Walter Hess. 156 pp., ill. Benno Schwabe & Co., Basel, Switzerland. 10 Sw. fr.

TECHNIQUES IN BRITISH SURGERY edited by Rodney Maingot. 734 pp., ill. W. B. Saunders Co., Philadelphia. \$15

CANCER OF THE COLON AND RECTUM by Fred W. Rankin and Stephens Graham. 2d ed. 439 pp., ill. Charles C Thomas, Springfield, Ill. \$7.50

Pediatrics

CHILD DEVELOPMENT by Elizabeth B. Hurllock. 2d ed. 669 pp., ill. McGraw-Hill Book Co., New York City. \$4.50

DIE EIGENART DER KINDLICHEN HIRNTÄTIGKEIT by Albrecht Peiper. 512 pp., ill. Georg Thieme, Leipzig. 28 M.

EIGHTY THOUSAND ADOLESCENTS: A STUDY OF THE YOUNG PEOPLE IN THE CITY OF BIRMINGHAM edited by Bryan H. Reed. 188 pp., ill. George Allen & Unwin, London. 12s. 6d.

Cardiovascular Disease

LE INSUFFICIENZE ACUTE DEL CIRCOLO PERIFERICO: LO SHOCK by Luigi Imperati. 330 pp., ill. Casa Editrice V. Idelson, Naples. 2,200 lire

MORBUS CAERULEUS: AN ANALYSIS OF 114 CASES OF CONGENITAL HEART DISEASE WITH CYANOSIS edited by Edgar Mannheimer. 332 pp., ill. Interscience Publishers, New York City. \$9.25

Urology

ESSENTIALS OF UROLOGY by J. C. Ainsworth-Davis. 734 pp., ill. Blackwell Scientific Publications, Oxford. 50s.

Modern Medicine

in convalescence . . .

Theptine

makes a
big difference



In convalescence a return to normal health is frequently retarded by two barriers: mental depression and nutritional depletion. In such cases 'Theptine' has proved to be an ideal preparation to help speed recovery.

'Theptine' supplies, in a light and pleasing elixir, the unique antidepressant action of 'Dexedrine' Sulfate *plus* the nutritional action of thiamine, niacin and riboflavin. 'Theptine' improves both the mental and physical tone of the patient . . . helps speed his return to normal life and living.

Smith, Kline & French Laboratories, Philadelphia

Theptine

'Dexedrine' plus essential B vitamins

an antidepressant and nutrient elixir

Available in 12 fl. oz. bottles.

'Theptine' & 'Dexedrine' are S.K.F. Trademarks

THE BEE CELL

Reg. U. S. Pat. Off.

A PESSARY OF PROVEN EXCELLENCE

Made from finest, soft, natural rubber. Easily removed and replaced by wearer. Worn with ease and comfort. Secures support by action of six concave surfaces. Sold directly to physicians or on the prescription of a physician—not through dealers.

Information, descriptive literature and reprints* mailed to physicians on request.

*The Bee Cell pessary. *West. J. Surg.* 57: 481-482, 1949



THE BEE CELL CO.

P. O. Box 212 Dept. A Buffalo 5, N. Y.

Gantrisin®

a more
soluble
sulfonamide

ROCHE

R FOR YOUR OFFICE

Gleaming White Porcelain and Stainless Steel

RENEWAL STERILIZERS

Automatic Shut-off Safe

Easy to Keep Clean Won't Rust

No. 12-11 inch—\$34.75
No. 18-7½ inch—14.75
No. 5-5 inch—7.95
At All Surgical Dealers

R FOR YOUR DIABETIC PATIENTS

RENEWAL No. 5⁺
DIABETIC STERILIZER

Specially Designed for
Personal and Private Service
For Syringe, Needles,
and Urine Tests

At All Surgical Dealers

\$7.95

AMERICAN SUNDRIES CO., INC., B'KLYN, N.Y.
Patented

Neurology

CARBON DIOXIDE THERAPY: A NEUROPHYSIOLOGICAL TREATMENT OF NERVOUS DISORDERS by L. J. Medina. 248 pp., ill. Charles C Thomas, Springfield, Ill. \$5

THE CEREBRAL CORTEX OF MAN; A CLINICAL STUDY OF LOCALIZATION OF FUNCTION by Wilder Penfield and Theodore Rasmussen. 248 pp., ill. Macmillan Co., New York City. \$6.50

CEREBRAL PALSY by John F. Pohl. 200 pp., ill. Bruce Publishing Co., St. Paul, Minn. \$5

THE CEREBRAL CIRCULATION IN HEALTH AND DISEASE by Carl F. Schmidt. 84 pp., ill. Charles C Thomas, Springfield, Ill. \$2

Obstetrics & Gynecology

A POCKET OBSTETRICS by A. C. H. Bell, 2d ed. 156 pp., ill. J. & A. Churchill, London. 7s. 6d.

THE GENEALOGY OF GYNAECOLOGY: HISTORY OF THE DEVELOPMENT OF GYNAECOLOGY THROUGHOUT THE AGES 2000 B.C.—1800 A.D. by James V. Ricci, 2d ed. 494 pp. Blakiston Co., Philadelphia. \$8.50

GYNAECOLOGY by Herbert H. Schlink et al., 2d ed. 650 pp., ill. Angus & Robertson, Sydney, Australia. 67s. 6d.

AIDS TO OBSTETRICS by Leslie Williams, 12th ed. 254 pp. Williams & Wilkins Co., Baltimore. \$1.75

Ophthalmology

SOME RELATIONS BETWEEN VISION AND AUDITION by J. Donald Harris. 65 pp. Charles C Thomas, Springfield, Ill. \$1.50

RECENT ADVANCES IN OCULAR PROSTHESIS by J. H. Prince. 155 pp., ill. E. & S. Livingstone, Edinburgh. 20s.

NUTRITION IN OPHTHALMOLOGY by John J. Stern. 128 pp. National Vitamin Foundation, New York City. \$1.50

THE TRUTH ABOUT YOUR EYES by Derrick T. Vail. 192 pp., ill. Farrar, Straus & Co., New York City. \$2.50

Otolaryngology

THÉRAPEUTIQUE MÉDICALE OTO-RHINO-LARYNGOLOGIQUE by Georges Portmann. 320 pp., ill. G. Doin & Co., Paris. 960 fr.

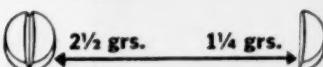
COMMON DISEASES OF THE EAR, NOSE AND THROAT by Philip Reading. 288 pp., ill. A. & C. Churchill, London. 21s.

(Continued on page 138)

The Analgesic  *for Home Use*
Genuine

Now in Convenient CHILDREN'S SIZE


GROOVED TABLETS EASILY BROKEN

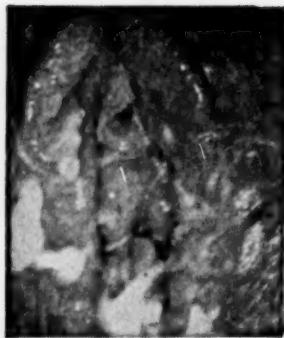


Thirty $2\frac{1}{2}$ grain Tablets 25¢

UNCOLORED
UNFLAVORED
CAN'T BE MISTAKEN
FOR CANDY!

Write for a package
The BAYER COMPANY DIVISION • 1450 Broadway • New York 18, N.Y.
OF STERLING DRUG INC.

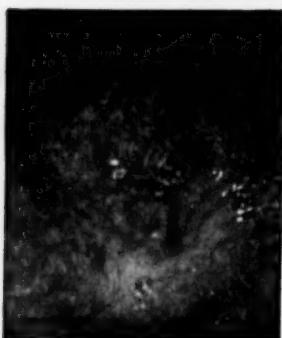
Trichomonal vaginal invasion is characterized by a profuse leukorrhea and disturbing pruritus. The discharge is usually foaming, saliva-like, thin and whitish, but may be thick, yellow and foul-smelling.



Vulvovaginitis (Mycotic)



Cervicovaginitis (Trichomonal)



Vulvovaginitis (Trichomonal)



Vaginitis (Mycotic)

Restore normal vaginal "chemistry"...

GOAL OF VAGINITIS MANAGEMENT

"For some time we have enjoyed the best results by the use of Floraquin tablets. Two are inserted each night at bedtime, full finger length, followed by a saline douche each morning, $\frac{1}{2}$ ounce to 1 quart of boiled water."

—Baer, J. L.: Office Gynecology, Wisconsin M. J.
48:504 (June) 1949.

Floraquin—a product of Searle Research—helps restore the normal acid pH which resists vaginal infection, while simultaneously combating the offending pathogenic organisms. It supplies also the carbohydrates essential for the maintenance of the normal vaginal flora. Floraquin supplies the protozoacide, Diodoquin-Searle, with lactose, dextrose and boric acid.

Floraquin Powder—for office insufflation.
Floraquin Tablets—for patient's use.

G. D. Searle & Co., Chicago 80, Illinois.

Searle

RESEARCH IN THE SERVICE OF MEDICINE



Rx cold solutions for dermatitis, insect bites, poison ivy, eczema, swellings, bruises, infections and traumatic injuries...

hot solutions for cellulitis, abscesses, carbuncles, boils, acute catarrhal otitis media, lymphangitis, etc.

Available at all drug stores



DOME CHEMICALS, INC.
109 West 46th St., New York 33, N.Y.

Complete Suction & Pressure Facilities--AT LOW COST!



GOMCO PORTABLE SUCTION & PRESSURE UNIT NO. 711

Here's accurately regulated suction (zero to 25" of mercury) and pressure (zero to 30 lbs.) in a compact, lightweight, low-cost unit. Includes Safety Overflow Valve, Yankauer suction handle with tubing, silk-covered spray tube with connection for DeVilbiss bottles.

Ask your Dealer.

Write for the
Gomco catalog.
See ALL Gomco units
ready to help you!

GOMCO
SURGICAL MANUFACTURING CORP.
810 N. FERRY STREET BUREAU 4-1215

Pathology

AN INTRODUCTION TO PATHOLOGY by G. Payling Wright. 569 pp., ill. Longmans, Green & Co., London. 30s.

Physical Therapy

KLINISCHES LEHRBUCH DER PHYSIKALISCHEN THERAPIE edited by J. Grober. 2d ed. 378 pp., ill. Gustav Fischer, Jena. 18 DM.

Nursing

HOSPITAL NURSING SERVICE MANUAL. 99 pp. National League of Nursing Education, New York City. \$1.50

ESSENTIALS OF MEDICINE: THE BASIS OF NURSING CARE by Charles Phillips Emerson, Jr., and Jane Elizabeth Taylor. 16th ed. 815 pp., ill. J. B. Lippincott Co., Philadelphia. \$4

PROGRESSIVE PROFESSIONAL NURSING by M. E. Grey. 104 pp. E. & S. Livingstone, Edinburgh. 6s.

NEW HORIZONS IN NURSING compiled by Josephine Nelson. 110 pp., ill. Macmillan Co., New York City. \$1.50

Miscellaneous

PRINCIPLES OF MEDICAL STATISTICS by A. Bradford Hill. 5th ed. 282 pp., ill. The Lancet, London. 10s. 6d.

IRISH MEDICAL DIRECTORY AND HOSPITAL YEAR BOOK 1950. 11th ed. 268 pp. Parkside Press, Dublin. 15s. 6d.

REFERENCE MANUAL FOR MEDICAL ETHICS by Charles J. McFadden. 96 pp. F. A. Davis Co., Philadelphia. \$1.25



"The doctor said to keep you absolutely quiet!"

Detailed Dosage Data for Physicians

A 20-page brochure prepared exclusively for the medical profession presents busy physicians with detailed dosage information relating to quantity, frequency and duration of administration in relation to menses, as well as indications, rationale, etc., regarding ERGOAPIOL (Smith) with SAVIN. This time-tested uterine tonic is thoroughly described in this brochure, "Menstrual Disorders—Their Significance and Symptomatic Treatment". A copy, available to physicians only, will be supplied on request. Ethical since its inception, ERGOAPIOL (Smith) with SAVIN is dispensed only on your prescription.

INDICATIONS: Amenorrhea, Dysmenorrhea, Menorrhagia, Metrorrhagia, and to aid involution of the postpartum uterus.

GENERAL DOSAGE: 1 to 2 capsules, 3 to 4 times daily—as indications warrant.

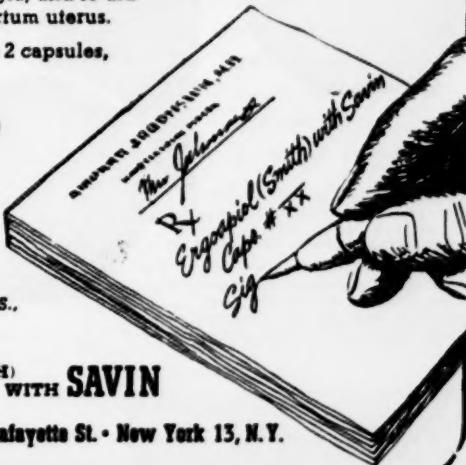
In ethical packages of 20 capsules each, bearing no directions.



Ethical protective mark, M.H.S.,
visible only when capsule
is cut in half at seam.

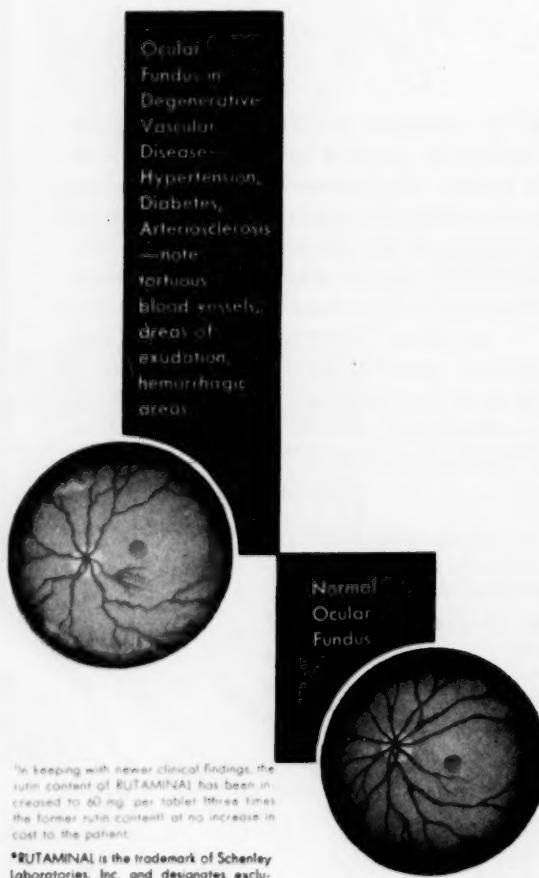
ERGOAPIOL (SMITH)[®] WITH SAVIN

Martin H. Smith Co. • 150 Lafayette St. • New York 13, N.Y.



RUTAMINAL*

the
protection
of
rutin¹
the
action
of
aminophylline
the
sedation
of
phenobarbital
—for
use
in
selected
cardiovascular
and
diabetic
conditions
in
which
excessive
capillary
fragility
presents
a
complicating
hazard
—bottles
of
100
tablets



¹In keeping with newer clinical findings, the rutin content of RUTAMINAL has been increased to 60 mg. per tablet (three times the former rutin content) at no increase in cost to the patient.

*RUTAMINAL is the trademark of Schenley Laboratories, Inc. and designates exclusively its brand of tablets containing rutin, aminophylline, and phenobarbital.

schenley laboratories, inc., 350 fifth ave., new york 1, n. y.

© Schenley Laboratories, Inc.

PATIENTS

... I Have Met

The editors will pay \$1 for each story published. No contributions will be returned. Send your experiences to the Patients I Have Met Editor, MODERN MEDICINE, 84 South Tenth St., Minneapolis 3, Minn.

Mountain Logic

One of my patients back in the hills had a wife who was mentally unbalanced and potentially dangerous. I spent considerable time helping him have her committed to a state institution. Naturally I was somewhat surprised when he called a couple of months later and asked me if I would help him get his wife back home.

"But Bob," I remonstrated, "you don't want to have her around; she's crazy. There's no telling what she may do."

"Yeah, I know, Doc," was his sheepish reply, "but a crazy wife's better than no wife at all."—P.W.A.

"Don't make this dose so stiff, Doc."—B.B.



"Whatever it is, give me two. I got a friend!"

Clean Start

Hiram Corntassel limped to the consultation chair, took off his shoe and sock, lifted his bare foot for me to see, and demanded, "What's good for a sprained ankle?"

A glance was enough to give me the answer. "Better try soap and water," I told him.—E.G.J.



a more
soluble
sulfonamide



AR-EX COSMETICS, INC., Pharm. Div.
1036-MA W. Van Buren St., Chicago 7, Ill.



**"new improved
Plastishields®
simplify breast
care during
lactation and
encourage
breast feeding"**

PLASTISHIELDS may now be
boiled or autoclaved.

- Reduce incidence of sore, fissured nipples
- Greater comfort for the nursing mother . . .

*For a longer duration
of breast feeding*

*Patent Number 2495307

Plastishield, inc.

Minneapolis 3, Minnesota

COME AND GET IT!



DELMOR® is a new and exceptionally useful formula for supplementing presurgical, obstetric, or convalescent diets with highest quality whole protein and other essential nutrients. A deliciously flavored powder, DELMOR may be given cooked or uncooked, with any kind of food, or between meals. Supplied in 1-lb. and 5-lb. bottles. Literature and recipes on request. Sharp & Dohme, Philadelphia 1, Pa.

Delmor®

nutrient powder



A new formula for nourishment!

Delicious!

Concentrated!

Each 100 Gm. of DELMOR contains:

PROTEIN	(N x 6.25) derived from milk and soybean	50 Gm.
CARBOHYDRATE	derived from cane, milk and grain sugars and soybean	20 Gm.
MINERALS	Calcium Phosphorus Iron	600 mg. 440 mg. 15 mg.
VITAMINS	Thiamine HCl (vitamin B ₁) Riboflavin (vitamin B ₂) Pyridoxine HCl (vitamin B ₆) Calcium pantothenate Niacinamide Ascorbic acid (vitamin C) Vitamin A Vitamin D	10 mg. 10 mg. 1 mg. 5 mg. 100 mg. 100 mg. 4,000 U.S.P. units 400 U.S.P. units
LIVER	Whole liver substance, together with other natural factors of the vitamin B complex, including vitamin B ₁₂	1 Gm.

The NEWEST COMBINATION /
MEDICS Ford-Bowles
STETHOSCOPE

No. P610
\$7.50

At your Surgical Dealer
or Write for Literature
GRAHAM-FIELD
273 Pearl St., N. Y. 7

FORD BOWLES
Valve control at
Your finger tip

ALKALOL

the balanced formula
for TIRED EYES

Write for Sample

The Alkalol Company, Taunton 10, Mass.



RECESSED SPECIALIST'S OUTFIT

See it at your dealer, or write

PROMETHEUS

ELECTRIC CORPORATION
401 W. 13th St. New York 14

Let's Be Reasonable

One of the routine questions we ask women seeking work when recording their histories on preemployment blanks, is: "During your periods are you disabled from work?"

Recently I was met by a blank stare. Then the girl replied, "I don't know. You see I have never worked before." —E.V.P.



"... a dry, hacking cough, headache, spots before my eyes, nausea, no appetite, can't sleep, indigestion, sore shoulder, nervousness, lame back . . ."

Significant Difference

The patient was feeling gloomy because of his apparent lack of progress. To cheer him up, the doctor said, "It isn't as bad as all that, John. Why, I've had exactly the same complaint myself."

"Yes, I suppose so," said John dubiously, "but you didn't have the same doctor." —E.G.J.

Just Curious

The patient, an unusually healthy man who had been sick hardly a day in his life, was spending his first day in a hospital. The doctor had just told him that an enema had been ordered.

The patient looked puzzled. "Never had one of them, Doctor," he said, "What does it taste like?" —K.D.

MR. NIPPER *is a meal skipper*

Nipper's nourishment, in the main, is bottled—and somewhat lacking in nutritional balance. For him, and other subclinical vitamin deficient, first comes new and proper diet. Then—to offset the possible lapse into old dietary habits—why not DAYAMIN capsules? This potent supplement contains six essential vitamins plus pyridoxine and pantothenic acid. The capsules are vanilla-flavored, small and easy to swallow. One daily as a supplement; two or more for therapeutic purposes. In bottles of 30, 100 and 250. Patients don't like capsules? Prescribe golden DAYAMIN Liquid with the citrus-like flavor and odor. Available in 90-cc., 8-fluid-ounce and 1 pint bottles. **Abbott**



NOTE THE FORMULA

Each DAYAMIN capsule contains:

Vitamin A	10,000 U.S.P. units
Vitamin D	1000 U.S.P. units
Thiamine Hydrochloride	5 mg.
Riboflavin	5 mg.
Nicotinamide	25 mg.
Pyridoxine Hydrochloride	1.5 mg.
Pantothenic Acid (as Calcium Pantothenate)	5 mg.
Ascorbic Acid	100 mg.

PRESCRIBE

Dayamin®

(ABBOTT'S MULTIPLE VITAMINS)

Gantrisin®

a more
soluble
sulfonamide

ROCHE

WHEN TREATMENT
IS INDICATED —

RECOMMEND → **THUM**
TRADE MARK

To
Discourage

NAIL-BITING

PAINT ON
FINGERTIPS

USE THUM IN STUBBORN
THUMB SUCKING CASES TOO

50c and \$1.00 ORDER FROM YOUR
SUPPLY HOUSE OR PHARMACIST

Have You Moved?

If you have changed your address recently notify us promptly so you will not miss any copies of

MODERN MEDICINE

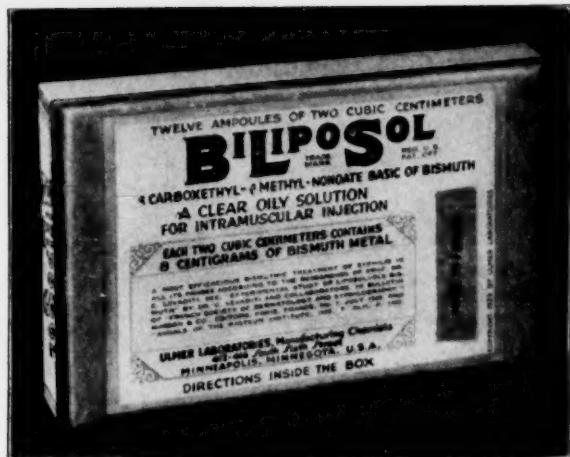
Be sure to indicate your old as well as your new address. Send notices to:

Circulation Department
MODERN MEDICINE
84 South Tenth Street
Minneapolis 3, Minnesota

INDEX TO ADVERTISERS

*The publishers are not responsible
for any errors or omissions.*

Abbott Laboratories	145
Atrikem, Inc.	109
Alkalol Co., The	144
American Sundries Co., Inc.	134
Ar-Ex Cosmetics, Inc.	141
Armour Laboratories, The	24-25
Barnes, A. C., Company	11
Bauer & Black	38
Bayer Aspirin	135
Bee Cell Co., The	134
Belmont Laboratories	4
Borden Company, The	76-77
Burroughs Wellcome & Co. (U.S.A.) Inc.	107
Central Pharmaceutical Company, The	44
Chatham Pharmaceuticals Inc.	39
Chilcott Laboratories	34-35
Ciba Pharmaceutical Products, Inc.	36, 4th Cover
Colwell Publishing Co.	123
Commercial Solvents Corporation	103
Denver Chemical Mfg. Co., Inc.	119
Desitin Chemical Co.	7
De Vilbiss Company, The	101
Dome Chemicals, Inc.	138
Eastman Kodak Company	46-47
Gomeo Surgical Manufacturing Corp.	138
Graham-Field	144
Hoffmann-La Roche, Inc.	8, 134, 141, 146
Homemakers' Products Corporation	122
Johnson & Johnson	54-55
Knox Gelatine	113
Lavoris Company, The	130
Lederle Laboratories, Inc.	53
McNeil Laboratories, Inc.	16-17
Merck & Co., Inc.	5
Merrell, The Wm. S., Company	2nd Cover, 23, 126-127
Modern Medicine Index	129
National Drug Company, The	33
Num Specialties	116
Numotinize, Inc.	43
Pfizer, Chas., & Co., Inc.	104-105
Pitman-Moore Company	98-99
Plastishield, Inc.	141
Professional Printing Company, Inc.	49
Prometheus Electric Corp.	144
Ralston-Purina Company	117
Riker Laboratories, Inc.	13
Ritter Co., Inc.	27
Robins, A. H., Company, Inc.	39-31, 110-111
Ryston Co., Inc.	50-51
Schenley Laboratories, Inc.	140
Searle, G. D., & Co.	136-137
Sharp & Dohme	142-143
Sherman Laboratories	125
Shield Laboratories	49-51
Smith, Kline & French Laboratories	15, 29, 133
Smith, Martin H., Company	139
Stuart Company, The	19-20
Taliby-Nason Company	37
Taylor Instrument Companies	22
Ulmer Laboratories	147
Varick Pharmaceutical Co., Inc.	131
Wampole, Henry K., & Co.	120-121
Whitehall Pharmaceutical Company	148
White Laboratories, Inc.	3, 115
Winthrop-Stearns Inc.	3rd Cover
Wyeth Incorporated	56



for
INTRAMUSCULAR
INJECTION IN
THE TREATMENT
OF ALL STAGES
of
SYPHILIS

BILIPOSOL

TRADE
MARK

REG. U. S.
PAT. OFF.

LIPOID SOLUBLE BASIC BISMUTH in clear oil solution

with Rapid and Sustained Spirochaeticidal Action

ITS PROMPT AND COMPLETE ABSORPTION insures immediate action and effectiveness.

Its slow elimination assures uninterrupted and increasingly intensive treatment.

See "Experimental Study of Liposoluble Bismuth" in Bulletin of French Society of Dermatology and Syphilography, No. 7, July 1928, and "Annals of the Pasteur Institute," 1928, T. XLII, Page 1489.

THERAPEUTIC LEVEL of bismuth in the blood stream when injections were made with Biliposol.

According to the clinical study of the excretion of bismuth, in the Archives of Dermatology and Syphilology, Vol. 28, No. 5, Nov. 1933, page 630, by Sollman, Cole, Henderson, et al, the median daily urinary excretion of metallic bismuth from one injection of Biliposol per week for three weeks was 5.7 mg.

Biliposol may be ordered through physicians' supply houses, retail and wholesale druggists, or direct from us, giving us your druggist's name.

The peak of excretion of bismuth reflects the maximal concentration in the blood which is one of the important factors in the therapeutic action.

BOXES OF 12, 50 AND 100—2 cc. AMPOULES
Each containing 80 mg. Bismuth

BILIPOSOL HAS STOOD THE TEST OF TIME

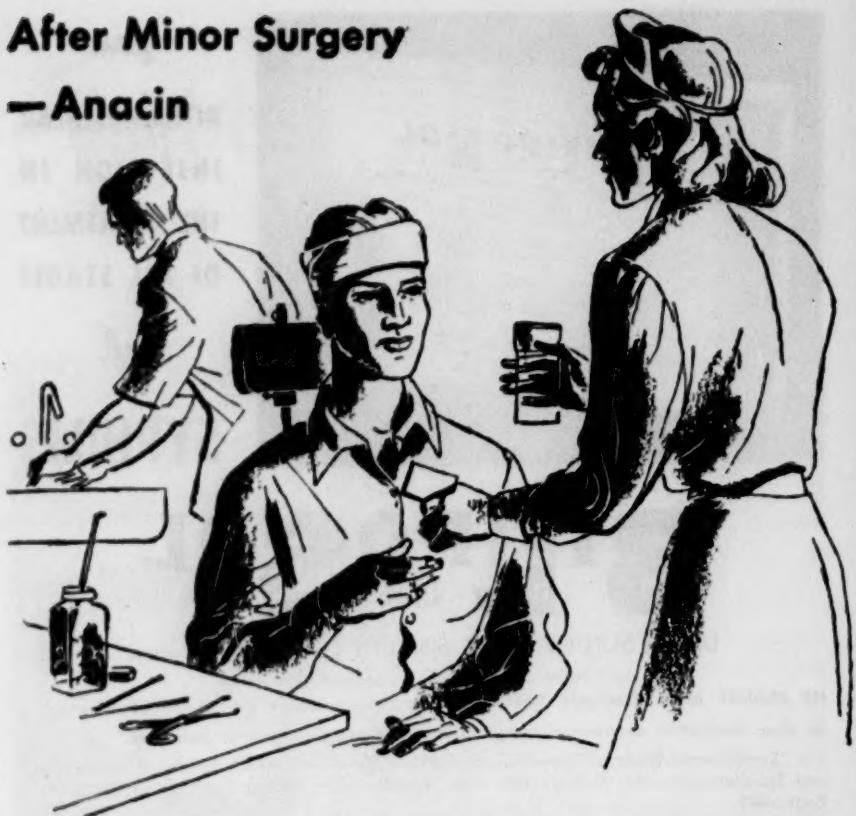
ULMER LABORATORIES

414 So. Sixth Street Minneapolis, Minnesota

Sole General Distributor for United States and Canada

LITERATURE TO PHYSICIANS ON REQUEST

After Minor Surgery —Anacin



In many cases of pain, following minor surgery, Anacin serves as a mild sedative as well as a fast, long-lasting analgesic. It brings effective relief of simple pain without the necessity of resorting to hypnotics or narcotics. Furthermore, Anacin helps relieve the nervous tension which often follows minor surgery. The time tried and proved APC formula of Anacin is quick-acting with a duration of effect exceeding that of plain aspirin. Available at all drug stores and hospital pharmacies. Trial samples sent upon request.

ANACIN



WHITEHALL PHARMACEUTICAL COMPANY • 22 East 40th Street, New York 16, N. Y.



Dont Gamble

In the modern world, the conscious cultivation of sensible habits of living—avoiding unnecessary emotional stress—plays an essential role and aids considerably in the stabilization of pressure on a lower level.

For supplementary medication Theominal, the vasodilator, antispasmodic and sedative, is well suited. Theominal exerts a general tranquilizing effect and thus helps to

control hypertension and reduce the tendency to induce dangerous vascular crises.

The average dose is 1 Theominal tablet two or three times daily. With improvement the dose may be reduced or omitted periodically. Each tablet contains 5 grains theobromine and $\frac{1}{2}$ grain Luminal.[®] Winthrop-Stearns Inc.
New York 13, N. Y.

Windor, Ont.

THEOMINAL[®] for arterial hypertension

Theominal, trademark reg. U. S. & Canada • Luminal, trademark reg. U. S. & Canada, brand of phenothiazine.





**More Complete
Therapy for
Cough Control***

depresses cough reflex
liquefies secretion
relieves histamine
congestion
relaxes the
bronchioles

Pyribenzamine® Expectorant

A Unique Combination of Non-narcotic Drugs

**Anesthetic
Decongestant
Antispasmodic
Antihistaminic**

FORMULA—Each teaspoonful (4 cc.) contains 30 mg. Pyribenzamine (tripelennamine) citrate, 10 mg. ephedrine sulfate, and 80 mg. ammonium chloride.

DOSAGE—Adults, 1 to 2 teaspoonfuls every 3 to 4 hours. Children, half the amount at same interval. Followed by full glass of water.

**PYRIBENZAMINE
A NO. 1 ANTIHISTAMINIC**

Ciba PHARMACEUTICAL PRODUCTS, INC., SUMMIT, N. J.

2/1555M